

# **Fine Motor Kit Activity Guide and Workbook**



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**For more information and webinar on Apps Enhancing Fine Motor Skills  
Please visit <http://assist-tech.ednet.ns.ca> Fine Motor tab**

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## Fine Motor Reference Book

This reference book is not intended to replace formal therapeutic evaluation of a child's skills nor is it a substitute for a personalized, individual treatment plan.

The following is a list of some of the hand skills essential to fine motor skill development. Each hand skill is described and a list of some activities to help develop each skill has been provided. Feel free to add additional activities in the space provided.

See appendix in the back for an explanation of \* activities.

It is important to first understand that the development of dexterous hand skills in children depends on the interaction of all joints of the upper extremity:

- scapulothoracic: shoulder and chest
- glenohumeral: upper arm and shoulder
- elbow: lower arm and upper arm
- wrist: hand and lower arm

Every proximal (close to the body) joint must provide a stable base of support for the joints distal (further from the body) to it to enable maximal control.

\*Adapted from: "The Learning Triad" by Mary Benbow MS, OTR

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Feel free to e-mail with any questions or concerns you may have.

## Fine Motor Kits List of Ingredients

√	Bingo dobber
	Craft Scissors
	Loop scissors
	Hole punch
	Baster
	Spray bottle
	Silly putty
	Sticker sheet
	Mini sticker sheet
	Tennis ball
	Dice
	Golf pencils
	Chopsticks
	Pom poms
	Needle
	Large Clothespins
	Mini Clothespins
	Mini binder clips
	Large binder clip
	Mini gel pens
	Wiki Stix
	Beads
	Plastic cups
	Bundle plastic lace
	Small bag elastics
	Coloured pencils
	Pipe cleaners
	Crayons
	The Pencil Grip
	Triangular Pencil grips
	Grotto grips
	iTunes card
	Stylus for iPad/iPod Touch
	Fine Motor Olympics Activity Guide

## Scapula (shoulder)

### Why it is important:

The scapula (shoulder) and chest muscles and joints provide the base or foundation for arm and hand movement.

### Activities:

- Ball/Balloon tapping \*
- Mirror arm patterns \*
- Animal Walks
- Precise Pouring \*
- Rope Jumping
- Blackboard / white board shoulder loops
- Vertical surface activities
- Chair push ups
- Wall pushups
- Theraband activities

Shoulder Activities handout

Others: [Add other ideas here](#)

## Wrist

### Why it is important:

The wrist stabilizes the fingers and thumb for writing and initiates the movement. Poor wrist movement and stabilization will impact the movement of the muscles, tendons and joint of the hand by not allowing them to move properly. Proper wrist extension (bend backwards) positions the fingers for optimal use while wrist flexion (bent forward) causes the muscles and tendons to shorten and curl getting in the way of movement.

### Activities:

- Crawling on the floor
- Animal walks
- Wheelbarrow racing
- Towel scrunching
- Donkey kicks \*
- Vertical surface activities \*

Finger and Wrist handout  
Fine Motor Exercises handout

### Others:

## Grip Strength

### Why it is important:

Grip strength means the strength of all the small muscles in the palm of the hand, fingers, thumb and forearm. Strong grip will allow for more control of tools and objects needed to complete tasks and increase endurance during tasks performance.

### Activities:

- Hole punching
- Scissor use
- Elastic bands
- Silly putty/play dough
- Tennis ball head
- Shaking dice

### Others:



## Pinch Strength

### Why it is important:

The index, middle finger and thumb are used in combination for many tasks. They are essential in grasping grasp objects large and small for activities from writing to eating to getting dressed.

### Activities:

- Clothes pegs
- Silly putty / play dough
- Chop sticks
- Buttons Tweezers / strawberry huller
- Scissors
- Hole punching
- Tongs
- Turkey baster
- Plastic knife cutting \*
- Elastic bands
- Coloring
- Painting
- Stringing beads
- Lacing
- Using the i-pad

Play Dough Exercises handout

### Others:

## Thumb Mobility

### Why it is important:

The thumb is a complicated digit. It has many ways of moving; from flexion and extension to rotating in circles. The thumb works by opposing the movement of the fingers. By working in opposition to the fingers it enables to hand to make complex movements and delicate manipulations. The thumb is primarily responsible for regulating the pressure, speed and dexterity needed to use tools for tasks, such as writing.

Important! The thumb moves best when the wrist is extended (bent backwards).

### Activities

- Elastic bands
- Thumb Wars
- Sit pull throughs \*
- Silly putty/ play dough
- Penny flipping
- Buttons
- Opening jars
- Squirreling/De-squirreling objects \*
- Texting 😊

Play Dough Exercises handout

### Others:

## Finger Mobility

Why it is important: There are three main goals of finger mobility

4. Hand arch development
5. Separation of the two sides of the hand
6. Open, stable thumb/index finger web space

1. **Hand arch development:** When all four fingers and thumb are working together correctly they form an arch in the palm of the hand. This arch is essential for proper hand function. No arch or a low arch is a sign of weak hand muscles and will lead to poor hand function.

“Writer’s Cramp” will often result because of poor had arches.

### Activities:

- Dice shaking
- Elastic Bands
- Palm Loading \*
- Palm shaping with balls \*
- Chop sticks
- Spiders on the mirror \*
- Plastic bag sealing
- Tweezers/strawberry huller

Tennis Ball Friend handout  
Fine Motor exercises handout  
Play Dough Exercises handout

### Others:

## Finger Mobility

2. **Separation of the two sides of the hand:** The hand can be separated into two working sides, each serving a different function.
  - a. **Pinky and Ring Fingers**- these two fingers generally have less mobility than the others and are used primarily for stabilizing the hand during tool use (writing).
  - b. **Index and Middle Fingers**- these two fingers have more mobility and are generally stronger than the others. They are used to aid movement during tool use and are essential to a strong grip.

### Activities:

- Spray bottles
- Squirt guns
- Penny flipping
- Finger patterns
- Scissor use
- Squirreling/De-squirreling objects \*
- Snapping fingers
- Rolling clay with fingertips
- Paper tearing
- Roll tissue paper
- Penny flipping
- Finger pattern games
- Lid removing/replacing

Sticker Targets handout  
Fine Motor exercises handout

### Others:

## Finger Mobility

- 3. Open, stable index/thumb web space:** These two digits are the most mobile on the hand and are the primary digits for tool use. Strong muscles and an open space between these two digits allows for optimal movement, precise control of the tool, and endurance during tool use.

### Activities:

- Clothes pegs
- Squirt guns
- Spray bottles
- Elastic bands
- Thumb wars
- Stringing beads
- Lacing
- Hole punching
- Cutting
- Board games (Bedbugs, Operation, Zoo sticks or Rookie Sticks)
- Eye droppers

Tennis Ball Friend Handout  
Fine Motor Exercises handout  
Play Dough Exercises handout

### Others:

# Appendix

# **Fine Motor Exercises**

## **Developing stability in wrist extension:**

1. Work on an elevated (tilted towards you) or vertical surface. Use an easel, blackboard, desk easel or slantboard, or tape some paper up on the wall or window.
2. Activities involving weight-bearing on the hands, such as wheelbarrow or crab walking

## **Strengthening Thumb-Index Webspace:**

1. Tennis ball friend (see handout)
2. Use clothespins or clips. Monitor to make sure that the child maintains a rounded and opposed grasp rather than using a lateral pinch or avoiding use of thumb altogether by bracing one side of clip in palm of hand
3. Tongs, large tweezers, strawberry hullers to pick up objects like cotton balls (games like Bedbugs, Operation, Zoo sticks or Rookie Sticks are motivating).
4. Use eye droppers (can make colorful designs on coffee filters with food color and water mixture)

## **Separating Function of the Two Sides of the Hand:**

1. Roll small balls of play dough or putty in fingertips
2. Tear paper while keeping ring and pinky fingers tucked into palms
3. Color in small pictures or fill a page of sticker targets with small stickers. (see handout)
4. Water guns or squirt bottles with one- or two-finger triggers. Keep other fingers tight around handle or neck
5. Roll tissue paper into balls to glue onto paper for collages
6. Penny flipping: line up a row of pennies and flip them all over one at a time as quickly as possible
7. Finger pattern games: copy adult in positioning individual fingers as demonstrated, working on moving just one finger at a time
8. Hold a tube of toothpaste or a small bottle in one hand and try to remove/replace the lid without using the other hand
9. Snapping fingers
10. Place two pennies and two paper clips in palm of hand. Try to move one penny to fingertips and place on table without using other hand, then one paper clip, and so on. Increase number of items as it gets easy.

## Help me Hold My Scissors



- 1) Make sure that the scissors are held in the right way – with the thumb through one hole and the middle finger through the other hole, and the index finger resting on the outside of the scissors. If the child’s fingers are very small, it is acceptable to put the index and middle fingers through the same hole.
- 2) Let your child just practice holding the scissors without the stress of being expected to cut anything. Getting your child to hold the scissors the right way each time he picks them up is a challenge in and of itself, so encourage him to pick them up then put them down as many times as he wants.
- 3) Show your child how he needs to spread his index finger and thumb as wide as possible to open the blades of the scissors and then how he needs to close his fingers to close the blades of the scissors. Explain that the wider he opens his fingers, the longer his cuts will be.

### Try this:

If your child is still struggling with the correct scissors grip, have him put the scissors down and shake your hand. When your child reaches to shake your hand, he will naturally rotate his hand so that his thumb is on top and his pinky finger is pointing towards the floor.

After you shake hands with your child once or twice, ask him to shake a third time. This time, as he extends his hand to you to shake, use your hand to pick up a pair of scissors by the closed metal blades and place the end of the scissors with the finger holes into his outstretched palm. Then verbally instruct him to put his thumb in the loop on top of the scissors and to put his index finger (or index finger and middle finger together) in the loop on the bottom.

Once your child is holding the scissors correctly, pick up a piece of paper and let your child cut through it a few times without worrying about using his non-dominant hand to steady the paper. Adapted from: [www.ot-mom-learning-activities.com/scissor-cutting.html](http://www.ot-mom-learning-activities.com/scissor-cutting.html)



# Pencil Grasp Patterns

## FUNCTIONAL GRASP PATTERNS



**Tripod grasp with open web space:** The pencil is held with the tip of the thumb and index finger and rests against the side of the third finger. The thumb and index finger form a circle.



**Quadrupod grasp with open web space:** The pencil is held with the tip of the thumb, index finger, and third finger and rests against the side of the fourth finger. The thumb and index finger form a circle.



**Adaptive tripod or D'Nealian grasp:** The pencil is held between the index and third fingers with the tips of the thumb and index finger on the pencil. The pencil rests against the side of the third finger near its end.

## IMMATURE GRASP PATTERNS



**Fisted grasp:** The pencil is held in a fisted hand with the point of the pencil on the fifth finger side on the hand. This is typical of very young children.



**Pronated grasp:** The pencil is held diagonally within the hand with the tips of the thumb and index finger on the pencil. This is typical of children ages 2 to 3.

### **INEFFICIENT GRASP PATTERNS**



**Five finger grasp:** The pencil is held with the tips of all five fingers. The movement when writing is primarily on the fifth finger side of the hand.



**Thumb tuck grasp:** The pencil is held in a tripod or quadrupod grasp but with the thumb tucked under the index finger.



**Thumb wrap grasp:** The pencil is held in a tripod or quadrupod grasp but with the thumb wrapped over the index finger.



**Tripod grasp with closed web space:** The pencil is held with the tip of the thumb and index finger and rests against the side of the third finger. The thumb is rotated toward the pencil, closing the web space.



**Finger wrap or interdigital brace grasp:** The index and third fingers wrap around the pencil. The thumb web space is completely closed.



**Flexed wrist or hooked wrist:** The pencil can be held in a variety of grasps with the wrist flexed or bent. This is more typically seen with left-hand writers but is also present in some right-hand writers

# **Play Dough exercises**

## **Finger Spread**

**This exercise will strengthen the muscles in your hand responsible for finger extension. Spread the play dough into a thin pancake shape and place it on a table. Bunch your fingers and thumb together and place them on the play dough. Press your fingertips into the play dough and spread out your fingers and the play dough with as much force as possible.**

## **Finger Scissor**

**This exercise will strengthen your fingers individually. Roll the play dough into a ball shape and place it between your index and middle finger. Squeeze your fingers together in a scissor-like motion. Repeat the squeeze between each pair of fingers.**

## **Scissor Spread**

**This exercise will improve your ability to spread your fingers apart. Wrap the play dough around the top of your middle and ring finger while they are together. Spread your fingers apart with as much force as possible. Repeat the scissor spread with each pair of fingers.**

## **Finger Pinch**

**This exercise will strengthen and improve your ability to pinch and pick up objects between your thumb and fingers. Roll the play dough into a ball and pinch it between your thumb and index finger. Repeat the pinch with each finger separately and finally with all four fingers at once.**

## **Thumb Extension**

**This exercise will strengthen your thumb extensors. Loop the play dough over the end of your bent thumb and hold the loose ends of the play dough in your hand. Press your thumb against the play dough to fully straighten it with as much force as possible.**

## **Thumb Press**

**This exercise will strengthen your thumb flexors. Hold the play dough in the palm of your hand. Press your thumb toward your little finger and into the play dough until it is pressed completely through to your palm.**

## **Shoulder Activities**

**Ball Tapping:** The child uses a 12”to 14” stick (rolling pin, dowel) braced between the palms of the hand (do not grip) to gently tap a suspended 8-10 inch ball (or balloon). The ball should be hung at a level that will require full elevation of the arms.

**Mirror Arm Patterns:** One person makes slow symmetrical movement sequences with her arm, the child follows as if looking in a mirror, switch roles.

**Precise Pouring:** Fill a container (measuring cup, watering can, etc) with colored water. Have the child pour the water into several small containers without spilling between them or overflowing their rims.

**Sphere on Spoon:** Have the child carry a round ball, marble or stone at arms length on a long handled wooden spoon. Instruct to then walk cross the room and back without dropping the sphere.

**Rope Turning:** Turn one end of the jump rope with a partner, switching hands often.

**Rope Jumping:** Self swing a jump rope; have the child swing the rope backwards over his head. Initially the child should focus only on swinging the rope, and then when he hears it hit the ground behind himself he should step backwards over it.

**Blackboard Shoulder Loops:** Have the child face the blackboard and make large over hand circle patterns with chalk on the blackboard.

**Wheelbarrow Walking:** Have the child place his palms on the ground and a partner hold his legs, have him “walk” forward on his hands.

**Bear Walking:** Have the child bend forward at the waist and place hands on the floor and walk forward with arms and legs extended.

**Leopard Crawl:** Have the child lie on his stomach and pull himself along the floor with his elbows. Encourage him to crawl under tables or chairs, etc. like an obstacle course

**Push Backs:** Have the child and a partner put their hands together keeping elbows slightly bent (make sure the elbows are held away from the body and not locked). Standing with one foot behind have them to push against each other until one moves backwards.

**Chair Push-ups:** have the child sit in a chair placing his hand on either side of the chair. Instruct him to push down through his arms until his bottom rises off the chair. Hold for five seconds, repeat (or make it a game to see how long he can hold it). If it is too easy have him lift his feet off the floor at the same time.

Adapted from: Benbow Hand Program and [ot-mom-learning-activities.com](http://ot-mom-learning-activities.com) (2011)  
Provided by Robin Philp, Occupational Therapist

## Sticker Targets

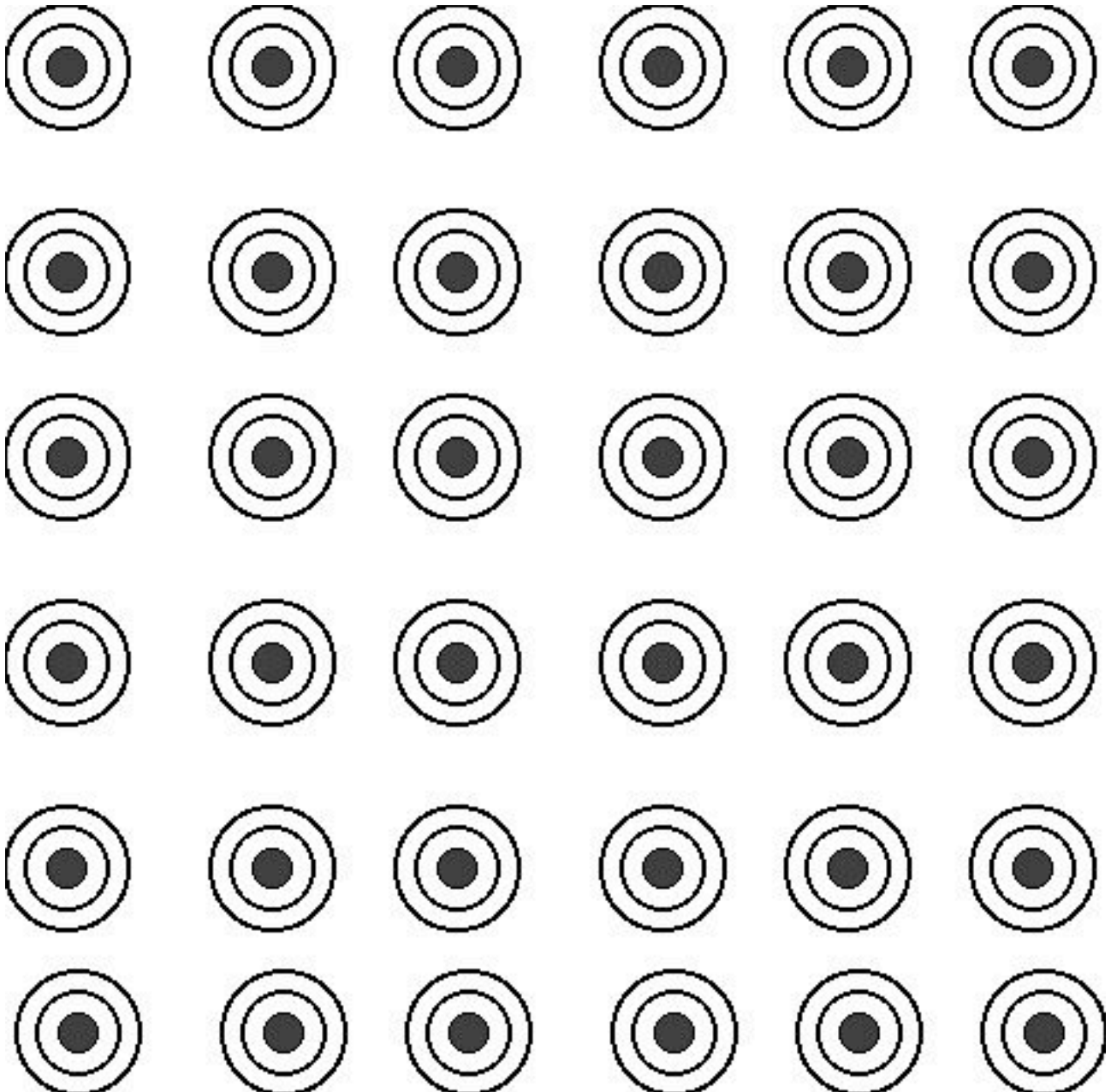
Try to get small (1/4") colored stickers (available at office supply stores) exactly inside the black circle!

If no black shows from under the sticker, you get 10 points each.

If black shows but it doesn't cross another line, you get 8 points.

If it crosses one line, you get 6 points.

If it crosses two lines, you get 2 points. Best possible = 360. Anything above 300 is doing great!



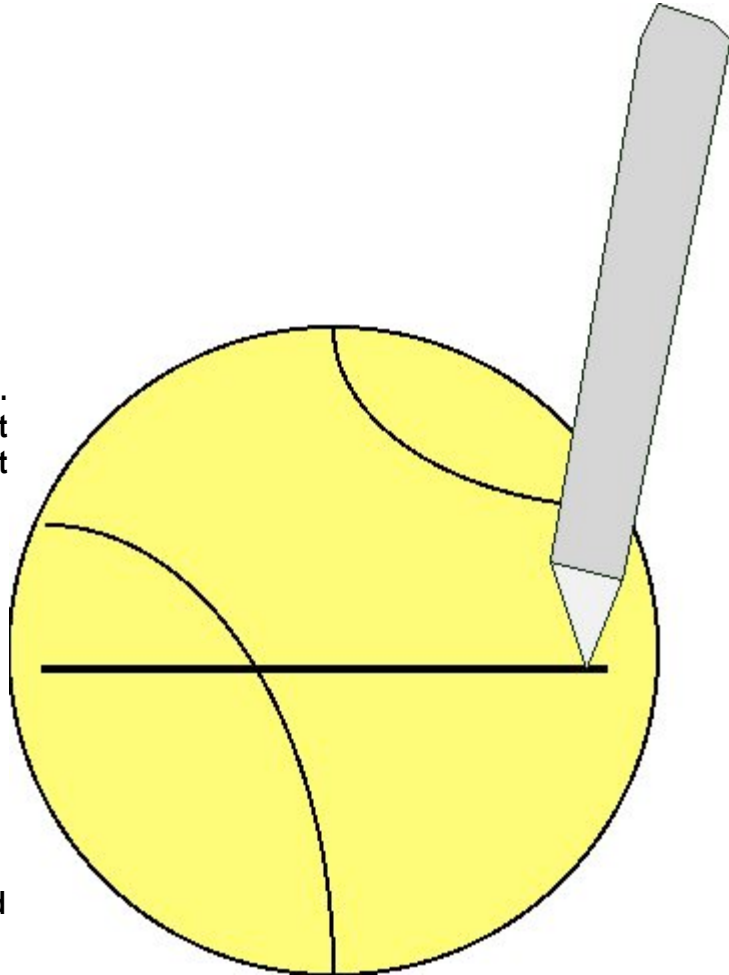
## How to Make a Tennis Ball Friend

This is a great tool for strengthening the hand in general, but specifically for helping develop hand arches and strengthen the base of the thumb for opposition to the index finger (very important for optimal pencil grasp and mechanics). It is used with children four to eight years old, but some older kids love them too.

Here's what you do...

Take an old tennis ball and **CAREFULLY** (I can't tell you how many times I have almost cut my palm doing this) cut a slit across the ball with an exacto knife or similar sharp blade. The longer you cut the line, the less resistive (easier to squeeze) the ball will be. Try it out and cut it until it is about as difficult as you want it. Now put on eyes, hair, whatever. You can just use a permanent marker, or fabric paint, yarn or feather for hair, whatever. Sometimes I cut a little X in the top and then push knotted yarn through with a darning needle to make hair. If you let the child draw on the face, they are often more invested in the toy.

Now place your thumb on one end of the mouth and your middle finger on the other end and squeeze. It should open the mouth like a change purse. You can make your new friend talk, eat, bite...



## Care and Feeding of Tennis Ball Heads

**Congratulations! You are the proud new owner of your own tennis ball head! Here is how to take care of him or her:**

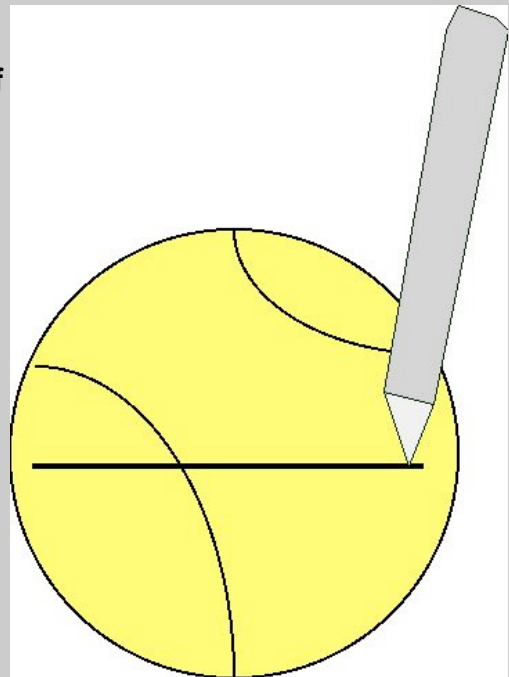
**Tennis ball heads are almost always hungry. In order to feed your tennis ball, you need to help him/her open his/her mouth. Put your thumb on one end of the mouth, and your fingers on the other end. Now squeeze. Tennis ball heads like to eat almost anything that will fit in their mouths. They like dried beans or pasta, small rocks, coins, dice, cotton balls, paper clips, marbles, bits of wood, small game pieces, and fingers. They do NOT like human food, including peanut butter, ice cream, macaroni and cheese, or anything else soft. You should try to feed your tennis ball at least once a day.**

**Tennis ball heads can help you with addition and subtractions. For example, suppose a tennis ball eats 3 beans. He is still hungry, so he eats 3 more beans. If you were curious about what  $3 + 3 =$  you could find out by making him spit out all those beans and counting them.**

**Tennis ball heads can also play spelling games with you. If you let your tennis ball eat small pieces of paper with letters on them, you are ready to begin. Each player take turns picking out letters. The first person who can make a word with his or her letters wins!**

**Tennis ball heads are also very helpful at picking up spills of small objects, and they like to attach themselves to various household items and “hang out.” See if yours likes to bite curtains, the backs of chairs, or doorknobs. Family members’ body parts are not allowed, but you may be able to attach your tennis ball head to a sleeve or collar. Make a fashion statement! Start a trend!**

**In any case, enjoy your tennis ball head. They are pretty easy-going and don’t demand much attention. Just don’t forget to feed them. You wouldn’t want to see a ravenous tennis ball head...!**





**NOTES:**