

**Blow it! Roll it! Knock it down!**

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## Have a ball! – with Jan’s favorite physical knowledge activity

You want a full-of-possibilities environment. It can be out doors or indoors, but you want to limit the play to ball play.

Five areas of ball possibilities are set up - but expect more possibilities than you think.

1. An angled tube
2. An incline
3. A table with balls and straws and paddles
4. Balls objects for “bowling”
5. “hoops”

Equipment: any or all of the following - add and subtract as you wish

1. A large cardboard wrapping paper tube tied to a stairwell handrail so that it is positioned at and 45° angle and has a small basket of balls near the upper end.
2. A small slide or incline with a basket containing several pairs of different balls.
3. Six ping-pong balls, 4 straws and a couple of paddles placed a low table.
4. A set of boxes and plastic bottles (bowling pins) and a variety of balls. A laundry basket or trash can to act as “hoops” with balls and bean bags nearby. (Taped lines on the floor about 3 feet out from the hoops encourage children to stand back and throw.)

Fifty balls:

1 large beach ball	1 nerf ball
2 soft vinyl soft-ball sized balls	6 tennis balls
14 ping pong balls	6 small playground balls
3 small plastic balls	3 hacky sacks
4 small basket-balls	2 small footballs
8 random balls	6 bean bags

You are going to take the children into the ball area and say, “We brought a million balls for ya’ll to play with today. What can we think of to do? Carson, what can you think of to do? La Shondra, what would you like to do with these balls?”

Watch for their reactions. See if they vary their actions, or vary their balls, or work to control a ball. Teach by asking questions not giving directions.

QUESTIONS:

What will happen if. . .?      Can you. . .?      How did you. . .?  
Can you do that again?      I wonder why. . .?      Wow!

You want the experimenting to be fun and exciting. You might see matching, gathering, bouncing, throwing, kicking, or rolling races. Watch how they are learning. Write it down! Use what you learn to create your own physical knowledge activities.

# Principles of Teaching Physical Knowledge Activities

- Introduce the activity in a way that maximizes a child's initiative.
  - § Put out materials to which she will naturally gravitate to.
    - Jan's 50 balls
  - § Present materials and ask leading questions to stimulate the child's thoughts and actions on the materials.
- Begin with parallel play
- Figure out what the child is thinking and ask a question or two in that direction
  - § You can see how an object reacts. You throw a ball. It travels through space > "What would happen if. . .?"
  - § You can work to produce a desired effect. You throw a ball and try to hit a target. > "Can you. . .?"
  - § You can become aware of how you produced the desired effect. You throw a ball overhand and notice it comes closer to hitting the target when you pitched it underhand. > "Can you do it again. . .?"
  - § You can work to explain causes > "I wonder why. . .?"
- Encourage children to interact
  - § To make predictions
  - § To produce desired effect
  - § To become aware of how an effect is produced
  - § To explain causes
- Reflect on activity afterward

## Examples of PKA's

- Bowling
- Inclines
- Scooping, Pouring and Catching
- Tubes
- Blowing
- Rolling a ping-pong ball back and forth on a table with "paddles"
- Stomp rockets, fishing poles, summertime toys. . .

## Questions to encourage investigations

### Basic Questions

What can we do with all these balls?

What will happen if. . .?

Can you. . .?

How did you. . .?

Can you do that again?

I wonder why. . .?

### Bowling

What would happen if you tried to knock those bottles over with this ping-pong ball?

Which ball would knock them over more easily?

Can you stack those boxes and bottles so we can knock them over?

How could you make the stack higher?

How could you make a structure that was easy to knock down?

What will happen if you use that ball?

### Inclines

What would happen if you let go of the ball at the top of the incline?

What happens if you put two balls on the incline?

Which one will go further? Which one will go faster?

See how those balls rolled over there? How else can you get a ball over there?

Could you have a race with the two balls?

What happens when you roll cars? Can you get another car to roll where that one is?

Can you make the cars roll faster?

What would happen if you rolled this can?

What else would roll? Would a block roll?

### Blowing

What would happen if you blow through that straw at that ping-pong ball?

What happens to the ball?

Can you blow the ball over there?

What happens if you blow at the big blue ball, the tennis ball, the whiffle ball?

What else can you blow?

Can you find something that doesn't blow?

### A basket of balls

How can you make the balls bounce? Which one do you think will bounce higher?

Can you think of a way to make a ball move without touching it?

Can you make the ball go in the hoop?

What would happen if you dropped the ball?

What would happen if you threw the ball down on the floor?

Can you roll the ball over there? Can you do it again?

How many balls can you get to fit in this basket?