Throwing Speed & Distance

Activity	Time	Description
Activity 1	15 minutes	Youth will consider the role of collaboration to a team and think about the skills that are needed to contribute to a team on the baseball field. Youth will participate in a whole group discussion of their own skills that they contribute to various aspects of their own lives (family, sports, classroom, etc.)
Activity 2	45 minutes	Youth will collaborate with their partner to measure and record their throwing distances. Youth will think about how measurement tools are used to calculate distance in baseball.

Throwing Speed & Distance

"The team with the best athletes doesn't usually win. It's the team with the athletes who play best together." - Lisa Fernandez

What does this quote mean to you?

Lisa Fernandez is a three-time Olympian and three-time gold medalist, leading the U.S. softball team as a pitcher and third baseman.

Different Skills for a Baseball or Softball Team

- What different skills are needed on a softball or baseball team?
- What different throwing skills are needed?


Orlando Ramirez | USA Today Sports


East Carolina University

Activity 1

Every teammate doing their job to help make the team successful

VIDEO: Joe Maddon On Teamwork - Every Play Is Connected

Talk to your table group.

What is an important message from the video?

What do YOU bring to the team?

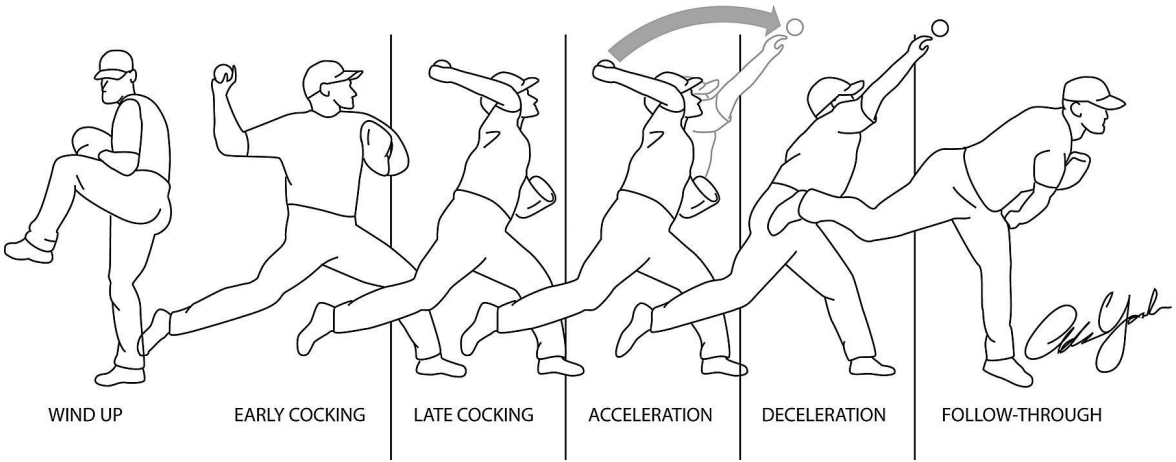
Talk to a Table Partner: What is something that you're good at that you contribute **to your family?**

Share with the Whole Group: What is something that you're good at that you contribute **to your class at school?**

Stand Up, Find a Partner and Share: What is something that you're good at that you contribute **to a team or to your group of friends?**

What Skills do Pitchers Bring? Fast Pitches!

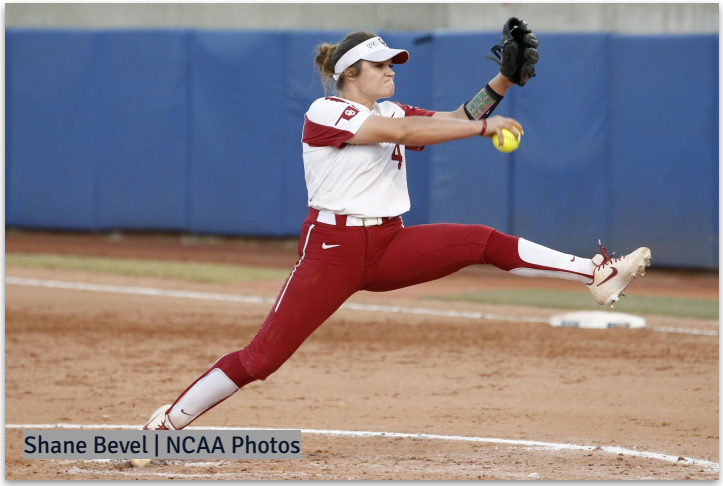
- What are some objects that you have thrown?
- How much strength do you need to throw these objects?



Activity 1

Throwing Speed: Predict

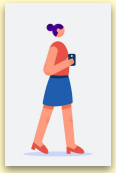
- How fast do you think professional baseball pitchers can throw (how many miles per hour)?
- Share your predictions with your table



Here are some other speeds to help you make a good prediction:

Cars often travel around miles per hour.

Walking speed is around miles per hour.



A high speed train can travel up to 125 miles per hour.

Throwing Speed: WOW!!

- **Youth** pitchers can throw **50-60 miles per hour**!
- **High school and college** pitchers can throw over **80 miles per hour!!**
- **MLB** pitchers can throw up to **100 miles per hour!!!**
  - This is **FASTER** than a cheetah. About 2 times as fast!
  - This is **ALMOST AS FAST AS** as a tornado.

Tape Diagrams to Visualize Throwing Speed

Cheetah:

10	20	30	40	50					

50 mph

MLB Pitcher:

10	20	30	40	50	60	70	80	90	100

100 mph

Tornado:

10	20	30	40	50	60	70	80	90	100	110	120

120 mph Tornado Speed

50 mph

<

100 mph

<

120 mph

- How do you think a pitcher contributes to the overall success of the team?
- What skills do you bring to **your** team?

DEMONSTRATE: How To Read A Tape Measure-Tutorial for Inches and Feet

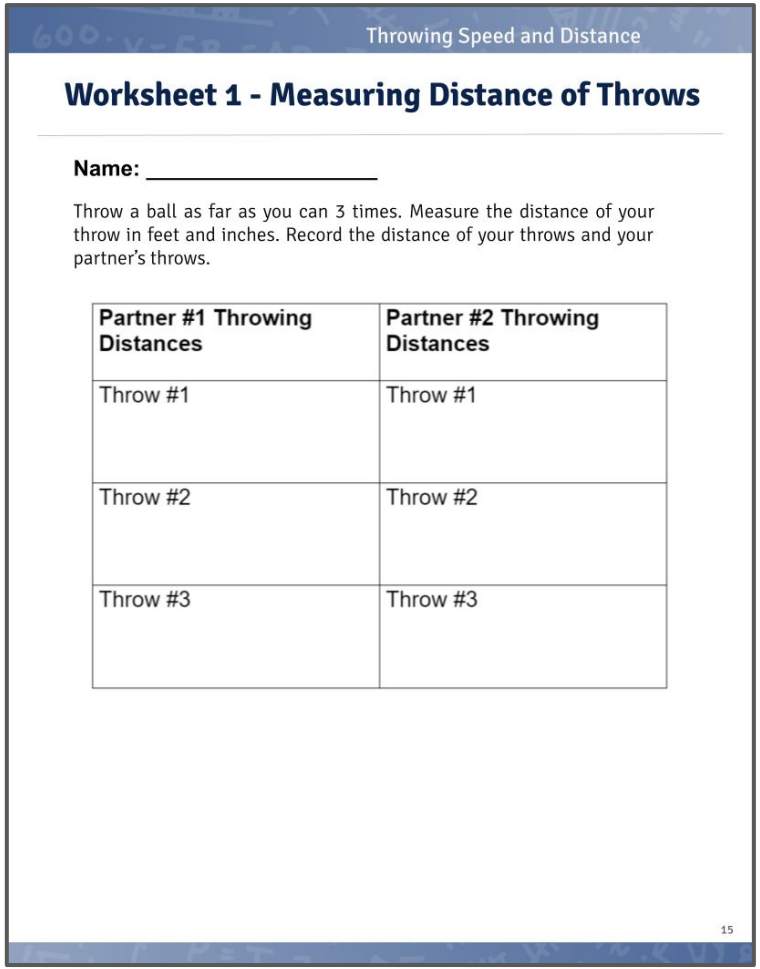
https://www.youtube.com/watch?v=CkwA5qR_Gc8 [0:30-1:20]

Which markings and numbers are important to read when measuring long distances (to the nearest inch)?

Measuring Distance of Throws

- Bring your notebooks, a pencil, and a 100-foot measuring tape to the gym or outside
- Each person will make 3 throws
- Measure and record the distance of each throw on Worksheet 1
- Let's see who can throw the farthest!

SAFETY: Make sure you **look before you throw**, making sure no one is standing in the path. If indoors, use a tennis ball or other soft ball.



Throwing Speed and Distance

Worksheet 1 - Measuring Distance of Throws

Name: _____

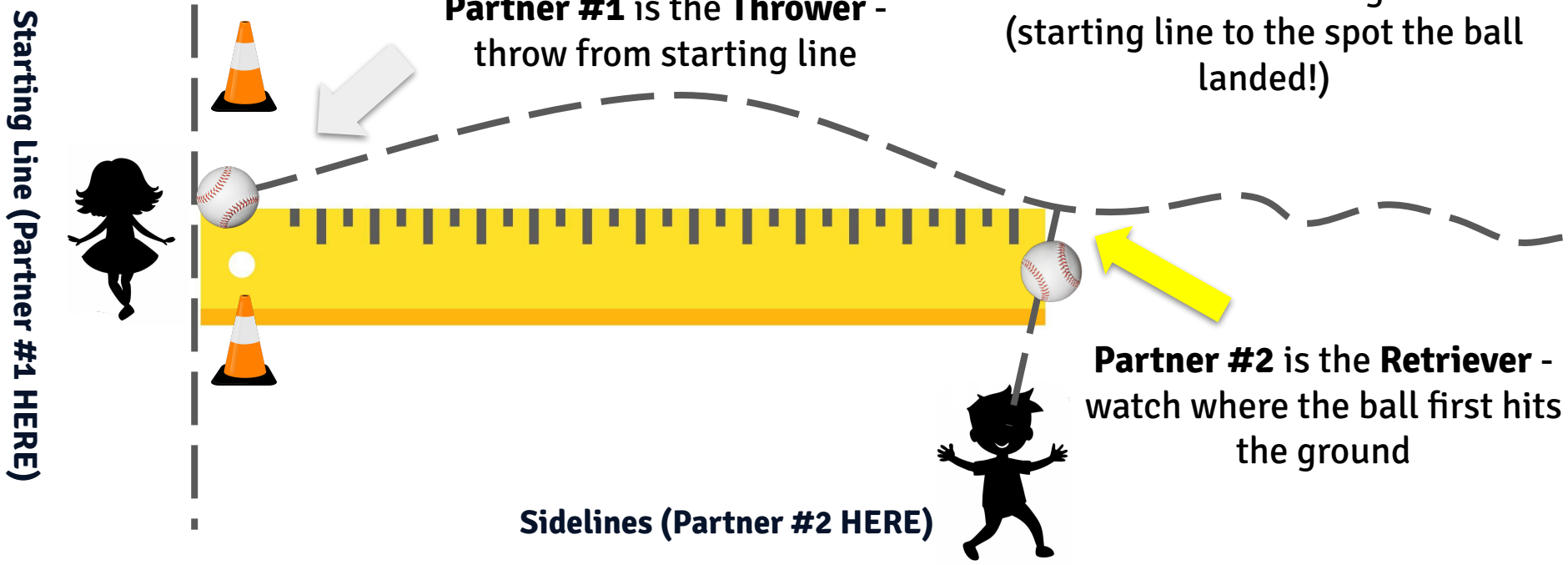
Throw a ball as far as you can 3 times. Measure the distance of your throw in feet and inches. Record the distance of your throws and your partner's throws.

Partner #1 Throwing Distances	Partner #2 Throwing Distances
Throw #1	Throw #1
Throw #2	Throw #2
Throw #3	Throw #3

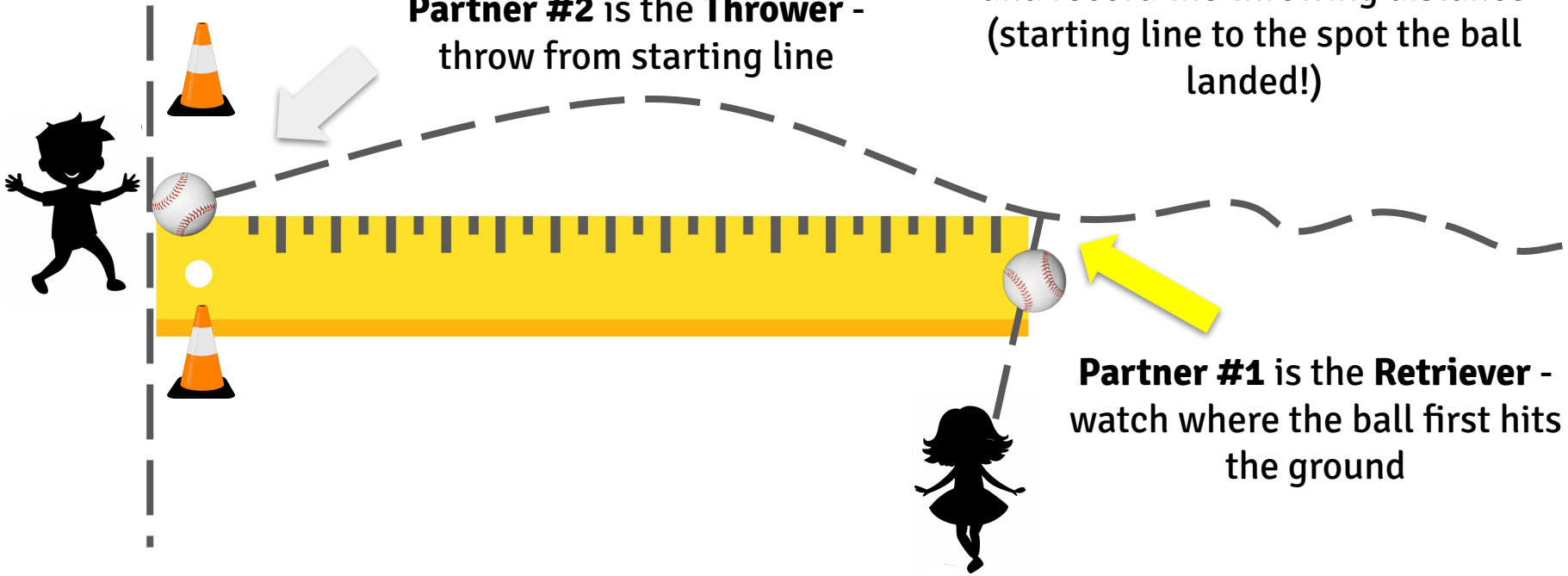
15

Activity 2

Measuring Distance of Throws (Partner #1 throws 3 times)



Then SWITCH: Each partner throws 3 times



 Activity 2

Optional Extension: Finding the Mean (Average)

	Throw 1 Distance	**Throw 2** Distance	**Throw 3** Distance
Thrower (name):	10 ft 6 in	11 ft 3 in	12 ft 0 in
Convert each distance to inches	(10x12) + 6 120+6 126 inches	(11x12) + 3 132 + 3 135 inches	(12x12) 144 inches
Add the 3 distances (in inches) to find the total throwing distance (in inches)	126 inches + 135 inches + 144 inches = 405 inches		

Optional Extension: Finding the Mean (Average)

Divide the total throwing distance by 3 to find the mean (average) throwing distance in inches	405/3 = 135 inches
Divide the mean distance in inches by 12 to find the **mean distance in feet and inches**.	135 inches/12 = 11.25 feet, or 11 feet with a remainder of 3 inches **11 feet, 3 inches**

- What did you notice about each of your 3 throws? Did you throw farther each time?
- What did you do to try to throw the ball farther each time?
- How many feet are there between bases? Could your throws make it all the way from home plate to first base on an MLB infield?