

# **Cross (Curricular) Fit**

**2012 Health and Physical Activity Institute**

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**YOUTUBE VIDEOS – [www.youtube.com/noodlegames](http://www.youtube.com/noodlegames)**

# Core Content in an Instant

## Spell and Run

Students will find a partner and stand outside the boundaries face clockwise. In the center of the space, the teacher will place spelling or math task cards face down. When the activity begins, the partner furthest from the center will begin jogging clockwise. The partner closest to the center will collect one flash card and then meet back up with the jogging partner. The partner with the flash card will read the vocabulary word to the other partner and wait for the response. If there is a mistake, the spelling partner will try again, if there are two mistakes then the partner with the flash card will spell his/her word. When the word is spelled correctly or the flash card partner has to spell the word, the spelling partner will take the word back to the middle of the playing area and pick up a new flash card and the activity continues with the partners reversing roles.

\* To help motivate participants, place “bling” (bracelets or other objects that students can wear) near the words. Each time a word is turned in, the students can collect “bling”.

## Rope Spelling

Students will find a partner and sit in an open space designated by the teacher. At one end of the playing area, the teacher will place a collection of spelling word flash cards (these can be spelling words of the week, health or PE vocabulary or Club 60 words). When the activity begins, one partner will collect a flash card and return to his/her partner. Using the ropes and their bodies, the partners will spell the word on the floor. When the word is spelled, the other partner will return the card and get a new one and the process will continue.

\* Motivate participation by taking photos of students using a digital camera. Print photos and post on a bulletin board.

## THE MALI ADVENTURE

**Skills:** Dodging, Fleeing, Teamwork, Social Studies (The Empire of Mali)

**Fitness Target:** Aerobic Capacity

**National Standards:** NASPE Physical Education Standard 1 & 5

**Equipment:** 2 scooter boards per team, one poly spot per team, 4 plastic laundry baskets, buckets, or large cones (bases), 2 or 3 additional scooters and demi-noodles for “bandits”, 100+ noodlettes, cones to mark “the salt and gold mines”

### Activity:

For this activity, the teacher will need to create enough groups so that there will be 3 or 4 students per team. Each team will be lined up at one end of the playing area (which will represent Timbuktu). At the other end of the playing area will be the salt, copper, and gold mines, place a large number of noodlettes (100+). The noodlettes will represent either gold or salt that the teams will try to bring back to Timbuktu (their team’s polyspot). The space between the mines and Timbuktu will be called the Niger River. In this space, the teacher can place several objects (buckets, cones, baskets, etc.) that represent a hiding place along the river to avoid the bandits. During the game, one player at a time may touch the object and use it as a base. The teams at the end of the playing area represent families attempting to make a living by collecting the Mali treasures (salt and gold). Each team will have two scooters. Two players from each team will get on a scooter and when the game begins, they will attempt to travel across the playing area to the other side to collect one treasure (a noodlette). To begin the game, there will be NO bandits. Therefore, all teams will be able to move their boats (scooters) down the Niger to collect the treasure. If a student falls off a scooter, they have fallen in the water and must return to their team and let someone else go. After a few minutes, the teacher will choose one team (of 3 or 4 players) to act as the bandits (who will try to intercept treasure hunters and steal their treasure). The bandits will have a demi-noodle and will ride on a scooter like the other players. The bandits will try to tag any other player below the waist. If a treasure hunter is tagged, they must pick up the scooter and return to their team and let another player have a turn. If the prey had collected a piece of treasure, they must return it before taking the scooter back to their team. If the treasure hunter successfully completes the task, they will allow another teammate to have their scooter and take a turn.

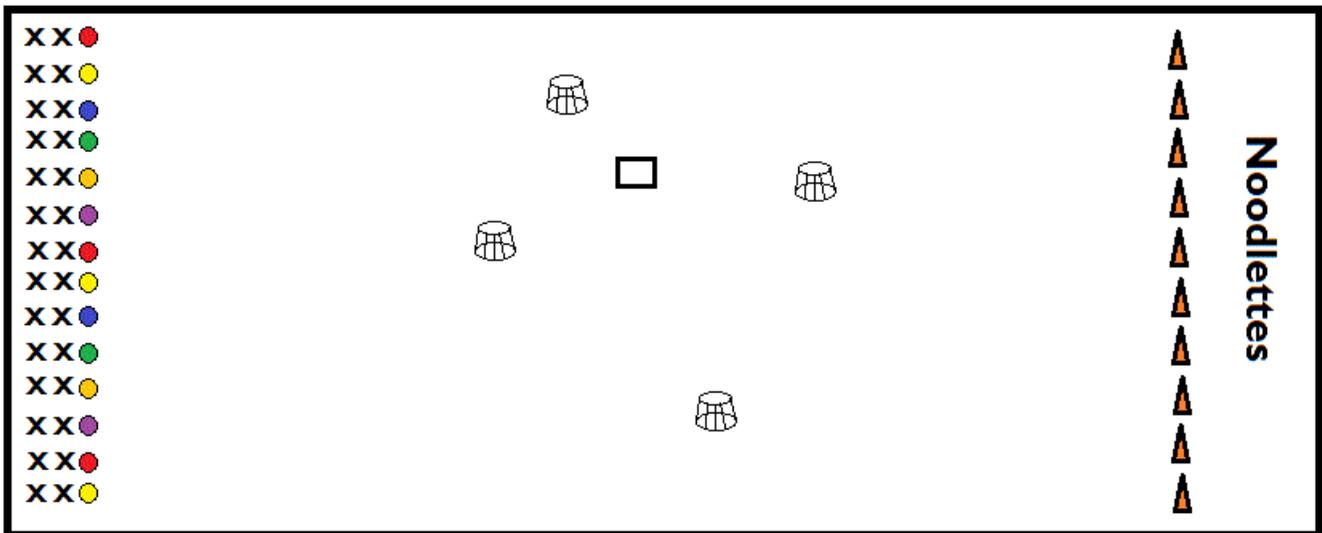
### Crossing the Curriculum:

- The Mali Empire was located in western Africa
- The empire spanned the modern-day countries of Senegal, southern Mauritania, Mali, northern Burkina Faso, western Niger, the Gambia, Guinea-Bissau, Guinea, the Ivory Coast and northern Ghana.

- Important concepts to highlight regarding Mali; oral tradition (storytelling), government (kings), and economic development (trade).

**Teaching Tips:**

- This game can be used to review the concept of habitat with students (vocabulary to include; habitat, predator, prey, conservation).
- To make the game more challenging, take away hiding places or add more predators (conservation concept). Adding a story about the reason for removing a hiding place is effective (i.e. – if an ocean habitat, there is an oil spill and some of the sea anemones did not survive).
- Switch groups every 2-3 minutes to ensure that each group has an opportunity to be the predators.
- To maximize student participation, keep the team sizes small. If there are more than 4 players on a team, make sure that there are at least two flags in use. This will keep players from waiting long because the two players with the flags can go at the same time (limiting the number of players waiting in line).
- To increase student activity levels, the teacher can assign an activity while the teammates wait for a scooters (i.e. – scarf juggling, partner toss and catch, jumping jacks, etc.).



## GREATER THAN OR LESS THAN

**Skills:** Teamwork, Cooperation, Math Skills (greater than, less than, equal to)

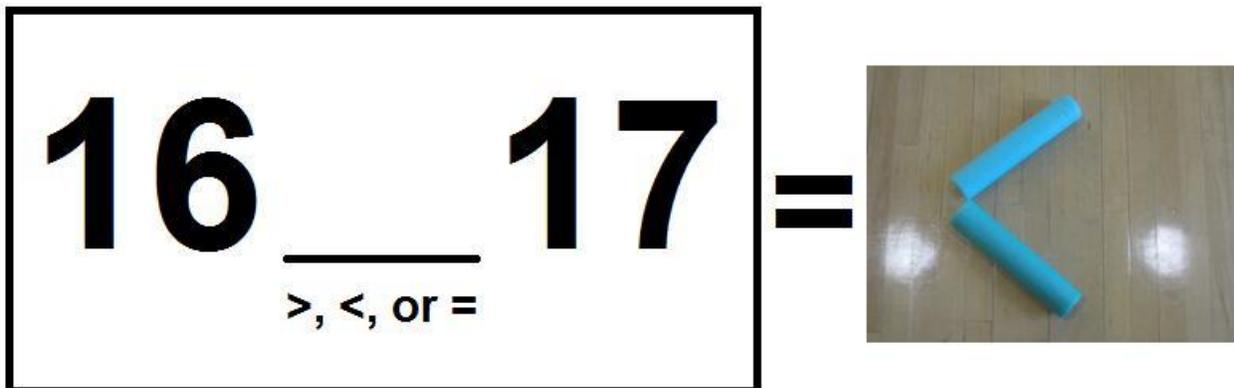
**Fitness Target:** Aerobic Endurance

**National Standards:** Physical Education Standard 1 and 5

**Equipment:** 2 Demi-Noodles or Foot-Long Noodles for each pair  
Greater than/ Less than Task Cards (lots)

### **Activity:**

The students will each need a partner for this activity. After finding a partner the pairs will start the activity on one end of playing area. On the other side of the space, there will be a large number of index/ flash cards with various math problems (greater than/ less than). Each pair of students will have a poly spot to designate their space and 2 demi-noodles or 2 foot-long noodles that will be used to solve the math problems. One partner will travel to the other end of the playing area and pick up a math card. When he/she returns, the partner who was waiting will try to solve the math problem on the card using the noodle pieces. The answer will be greater than (>), less than (<), or equal to (=). Once the problem is solved the partners will switch roles and the activity will continue. The partners will continue the activity until time is completed or they have solved a certain number of problems (to be designated by the teacher).

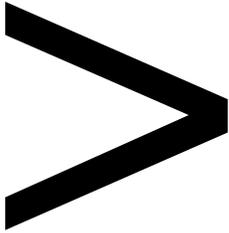


### **Teaching Tips:**

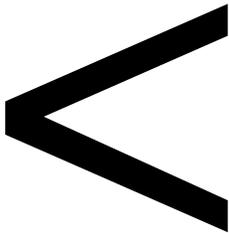
- To fit fitness components to this activity, the partner who is waiting can do a fitness activity designated by the teacher (noodle squat, noodle lunges, noodle push-up rolls, etc.).
- To make traveling more interesting, the teacher can have the students move using various locomotor patterns (galloping, skipping, jogging, etc.).
- Have the students keep the cards when they have solved the problems. At the end of the game, the teacher can assign the cards a point value (3, 4, 5, etc.) and the students can calculate how many points they earned (cross-curricular).
- To ensure more movement, increase the distance between the starting point (poly spots) and the flash cards.
- Remind students to use teamwork and communicate in an appropriate manner with their teammates.

# Greater Than or Less Than – Fitness Tasks

## SUPERMAN PLANK



## PUSH-UP SHOULDER TAPS



## CRAB KICKS



SAMPLE GREATER THAN OR LESS THAN CARDS (1)

25\_15

[www.noodlegames.net](http://www.noodlegames.net)

86\_68

[www.noodlegames.net](http://www.noodlegames.net)

47\_74

[www.noodlegames.net](http://www.noodlegames.net)

52\_55

[www.noodlegames.net](http://www.noodlegames.net)

21\_19

[www.noodlegames.net](http://www.noodlegames.net)

123\_129

[www.noodlegames.net](http://www.noodlegames.net)

33\_44

[www.noodlegames.net](http://www.noodlegames.net)

4/2\_2

[www.noodlegames.net](http://www.noodlegames.net)

SAMPLE GREATER THAN OR LESS THAN CARDS (2)

$25.5$  \_  $25\frac{1}{2}$

[www.noodlegames.net](http://www.noodlegames.net)

$239$  \_  $339$

[www.noodlegame.net](http://www.noodlegame.net)

$356$  \_  $299$

[www.noodlegames.net](http://www.noodlegames.net)

$33$  \_  $33$

[www.noodlegames.net](http://www.noodlegames.net)

$4.25$  \_  $4\frac{1}{4}$

[www.noodlegames.net](http://www.noodlegames.net)

$5.5$  \_  $5\frac{1}{4}$

[www.noodlegames.net](http://www.noodlegames.net)

$54$  \_  $45$

[www.noodlegames.net](http://www.noodlegames.net)

$80$  \_  $89$

[www.noodlegames.net](http://www.noodlegames.net)

SAMPLE GREATER THAN OR LESS THAN CARDS (3)

901\_1001

[www.noodlegames.net](http://www.noodlegames.net)

45\_54

[www.noodlegames.net](http://www.noodlegames.net)

446\_444

[www.noodlegames.net](http://www.noodlegames.net)

99\_101

[www.noodlegames.net](http://www.noodlegames.net)

55.9\_58

[www.noodlegames.net](http://www.noodlegames.net)

96.1\_96

[www.noodlegames.net](http://www.noodlegames.net)

455\_456

[www.noodlegames.net](http://www.noodlegames.net)

846\_845

[www.noodlegames.net](http://www.noodlegames.net)

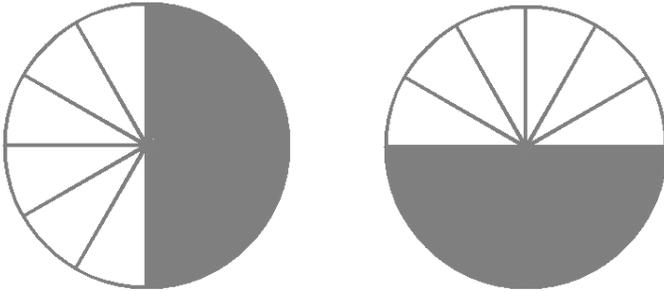
SAMPLE GREATER THAN OR LESS THAN CARDS (4)

901\_1001

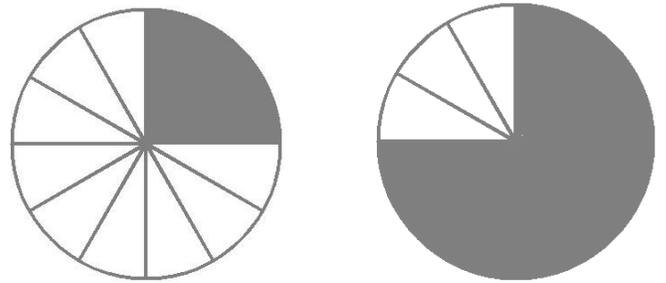
www.noodlegames.net

45\_54

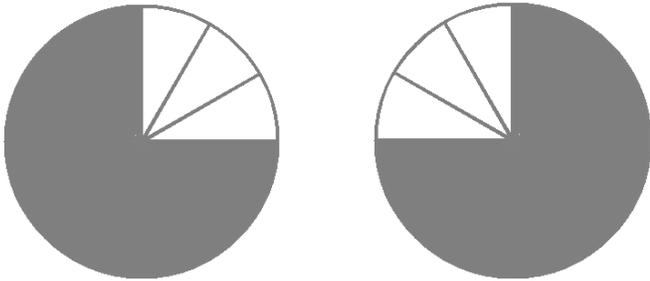
www.noodlegames.net



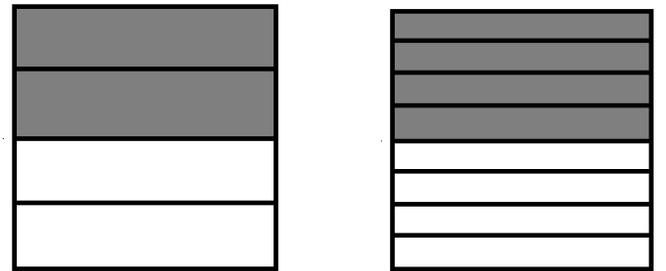
www.noodlegames.net



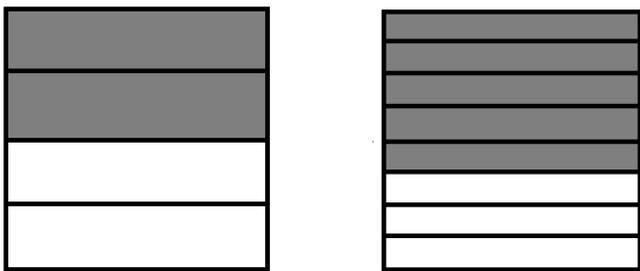
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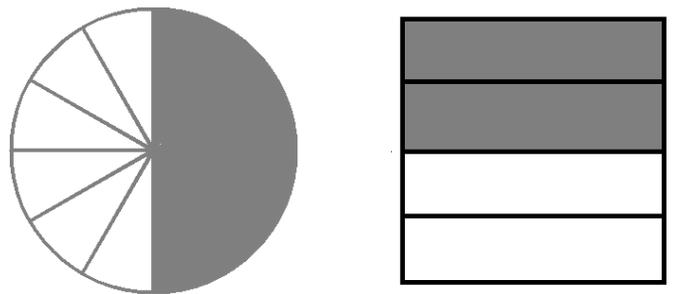
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# Physical Education Lesson Plan

**Lesson:** Heart Rate Experiment (Grades 3-5)

**P.E. SOLs:** 3.1a,3.4a,4.1a,4.2a,5.2b,5.3

**Objectives:** Students will demonstrate how to use a handheld heart rate monitor. Students will complete a physical experiment to determine which activity will cause the highest heart rate. Students will define basic terms needed to complete an experiment. The students will work cooperatively and appropriately with a partner. Students will work safely at the stations and follow directions.

**Equipment:** **Station 1** – 6 hand held heart rate monitors, 20+ jump ropes, 10-20 dry-erase tablets and dry-erase pens; **Station 2** – 3 -6 Chinese Jump Ropes, 3 -6 “Hornet Pattern” Task Cards; **Station 3** – 20+ assessment sheets, 20+ pencils, 20+ balls, 10 Partner Throwing and Catching task cards

**Warm-up:** Students will jog for 2.5 minutes then perform stretches

**Organization:** Students will find partners after the station demonstrations, the teacher will send the partners to different stations based on class numbers.

**Activity:** **Heart Rate Experiment**

Fourth and Fifth Grade students will be doing three stations during this activity (Station 1 – Heart Rate Experiment, Station 2 – Chinese Jump Ropes and task cards, and Station 3 – Assessment Sheet, Balls, Throw and Catch Task Cards).

Third Grade students will all complete the Heart Rate Experiment as a group. If there is time remaining, the students will practice working on the Chinese Jump rope pattern attached below.

**The Heart Rate Experiment** – After the warm-up is complete, the teacher will take all the students to the experimentation area to go over the basic procedures for the experiment. The teacher will review the basic concepts and vocabulary (grade level appropriate) related to completing an experiment (the vocabulary is listed below). Next, the teacher will show the students how to use the hand held heart rate monitors (HHHRM) and have several students demonstrate how they work. After reviewing the basic procedures and safety rules regarding the hand held heart rate monitors, the teacher will go over the procedure for the experiment. The students will work with a partner and read the chart and complete the activity on the chart then use the HHHRM to measure their heart rate. Once they have a “good” reading, they will record their data on the pair’s dry-erase tablet next to the number of the activity completed. When all of the activities have been completed and the data recorded, the students will place a chip in the container labeled with the number which matches the activity that caused the highest heart rate. Before starting the experiment, the students will be asked to form a hypothesis about which activity they think will cause the highest heart rate. If the experiment is completed before time is up, the students will jump rope until it is time to rotate to the next station.

Sample List of Heart Rate Experiment activities (best if posted on a board or chart paper for all students to see);

- 1) Sit and count to 30 slowly
- 2) Perform 20 jumping jacks
- 3) Walk slowly for 40 steps
- 4) Perform 30 jump rope jumps (turning the rope or placing it on the floor)
- 5) Perform 8 push-ups

**Chinese Jump Rope Station** – The partners will join another pair for this activity. One pair will hold the Chinese jump rope with their feet and the other pair will get to jump. The objective is to jump the pattern (Hornet Pattern...see pattern task card below) without making any mistakes. Regardless of any mistakes, each partner will complete the pattern when it is their turn. After the first pair has taken a turn, the second pair will take their turn. After both pairs have tried the pattern at Level 1 (around the ankles), the Chinese jump rope will be raised to Level 2 (behind the calves) and the activity will continue. If there is time and Level 2 has been completed, the group may try the pattern at Level 3 (behind the knees).

\*\* Remind all students how they can demonstrate good teamwork during this activity (communicate appropriately, call out the pattern to help the jumpers, encourage teammates, hold the rope still, etc.).

**Assessment** – Students will continue working with a partner at this activity. One partner will collect an assessment sheet (see the *2010 Skill & Knowledge Review Assessment* sheet for an example) and the other partner will get a pencil. The

partners will work together to complete the assessment. When the sheet is completed, the students will turn in the assessment and the pencil and then may begin the Partner Throwing and Catching task card that will be located near the balls.

Each station will last approximately 7 minutes long.

# Experiment Vocabulary

## 3<sup>rd</sup> Grade

- Questions frequently arise from observations. Hypotheses can be developed from those questions. Data gathered from an investigation may support a hypothesis.
- *Predictions* are statements of what is expected to happen in the future based on past experiences and observations.
- An *inference* is a conclusion based on evidence.

### VOCABULARY

**Hypothesis** – if we \_\_\_\_\_, then \_\_\_\_\_?

**Materials** – what was used to make the experiment?

**Observe** – what did you see?

**Predict** – what will happen?

**Conclude** – what did happen? What do we now know?

**Variables** – what could change to make differences in the outcome of the experiment?

## 4<sup>th</sup> Grade

- An *inference* is a conclusion based on evidence about events that have already occurred. Accurate observations and evidence are necessary to draw realistic and plausible conclusions.
- A scientific *prediction* is a forecast about what *may* happen in some future situation. It is based on the application of scientific principles and factual information.
- An *experiment* is a fair test driven by a hypothesis. A fair test is one in which only one variable is compared. A *hypothesis* is a prediction about the relationship between variables
- In order to conduct an experiment, one must recognize all of the potential variables or changes that can affect its outcome.
- A *manipulated variable* is the factor in an experiment that is altered by the experimenter.
- A *responding variable* is the factor in an experiment that changes as a result of the manipulated variable.

### VOCABULARY (same for 4<sup>th</sup> and 5<sup>th</sup> grade)

**Hypothesis** – an educated guess

**Independent Variable** – what was changed or manipulated?

**Dependent Variable** – what was the outcome of the change?

**Constant** – what stays the same?

**Data** – what information did we collect?

**Conclusion** – what did we learn from the experiment?

## 5<sup>th</sup> Grade

- A scientific *prediction* is a forecast about what *may* happen in some future situation. It is based on the application of factual information and principles and recognition of trends and patterns.
- *Observation* is the use of senses to collect information about the environment. *Inference* is the use of prior knowledge and experience to generate conclusions about those observations.

# 2010 Skill & Knowledge Review Assessment

## Physical Education Assessment #1: Heart Rate

1. What is your heart rate? (CIRCLE THE CORRECT ANSWER)  
A) # of beats in 15 seconds  
B) # of beats in 1 minute  
C) # of beats in 10 minutes



2. Where are the two locations where you can find your pulse?  
\_\_\_\_\_ & \_\_\_\_\_



## Physical Education Assessment #2: Overhand Throw

1. Write the correct order for the overhand throw pattern next to correct step:  
\_\_\_ THROW  
\_\_\_ STEP  
\_\_\_ FOLLOW-THROUGH  
\_\_\_ READY POSITION



2. Before throwing a ball to a partner, what are some things you should look for (name two):  
\_\_\_\_\_  
\_\_\_\_\_

3. When throwing a Frisbee, which foot should step toward the target? (circle the correct answer)  
SAME SIDE FOOT or OPPOSITE FOOT

## Physical Education Assessment #3: Pedometers

1. What does a pedometer measure? \_\_\_\_\_
2. Where do you wear a pedometer? \_\_\_\_\_
3. Why is it important to use a pedometer?  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



# THE HORNET PATTERN



## PART 1

(The ready position for this pattern is one foot in the ropes and one foot outside (see diagram below))



1	Jump 1	
2	Jump 2	
3	Jump 3	
4	Jump 4	

## PART 2

5	Jump In	
6	Jump Out	
7	Jump In	
8	Jump On	

### PARTNER THROWING AND CATCHING TASK CARD

## Throwing and Catching Task Card

### Instructions:

1. Find a partner
2. Collect one ball and line up on opposite “throwing lines” that are designated by the teacher
3. Start with the first task on the card
4. Complete each task three times before moving to the next challenge
5. Place a check (check) in the designated box if the task was completed correctly
6. If all the tasks are completed and there is time left over, start over from the beginning

<b>TASK 1:</b>	<b>TRIAL 1</b>	<b>TRIAL 2</b>	<b>TRIAL 3</b>
Complete 10 total underhanded tosses with your partner (each partner makes 5 tosses). Did you catch 6 out of 10?			
<b>TASK 2:</b>	<b>TRIAL 1</b>	<b>TRIAL 2</b>	<b>TRIAL 3</b>
Complete 10 total overhand throws with your partner (each partner makes 5 throws). Did you catch 6 out of 10?			
<b>TASK 3:</b>	<b>TRIAL 1</b>	<b>TRIAL 2</b>	<b>TRIAL 3</b>
Each partner take one step away from the “throwing line” and complete TASK 1. Did you catch 6 out of 10?			
<b>TASK 4:</b>	<b>TRIAL 1</b>	<b>TRIAL 2</b>	<b>TRIAL 3</b>
Each partner remain one step away from the “throwing line” and complete TASK 2. Did you catch 6 out of 10?			

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