Name: _____

Playing Footsie: Forces in Soccer

GRADES K-2

Data Table:

Drill	Observations	Time
Dribble ball with inside of the foot		
Trap the ball with the bottom of the foot		
Stop the ball with the inside of the foot		
Pass the ball with the outside and inside of the foot		
Shoot with the top and inside of the foot		

Evaluate:

Rate drills from highest energy transfer (most motion) to least.

1.
2.
3.
4.
5.

Module 2.0

Name: _____

Penalty Shootout: Kicks and Probability

GRADES K-2

1. How many penalty shots can I make out of 10?

2 **Hypothesis:** I will score _____ goals out of 10.

X - Shot made O - Shot missed

	1	2	3	4	5	6	7	8	9	10	Total Made
Partner 1											
Partner 2											

STEM sports science • technology engineering • math • sports

Name: _____

Penalty Shootout: Kicks and Probability

GRADES K-2

Ask students the following the questions:

1. How many shots did I take?

2. How many shots did I make?

3. How many shots did I miss?

4. Can you write it as a math equation?

5. Can you find the percentage of shots made? Divide.

Results: Refer back to your hypothesis:

1. Were you correct?

2. Was it over/under your actual shots made?

Name: _____

Football Properties: Pee-Wee Football vs. Foam Football

GRADES K-2

Properties

	Color	Shape	Texture	Length, Height and Circumference	Materials
Pee-Wee Football				L-	
				H-	
				C-	
Foam Football				L-	
				H-	
				C-	

Behaviors

	How does it bounce?	How far can you throw it?	How far can you kick it?	Is it easy to catch?	How does it feel?
Pee-Wee Football					
Foam Football					

Module 4.0

Name: _____

Catch Me If You Can

GRADES K-2

What is the best distance to play catch?

Hypothesis: We think _____ yards is the best distance to play catch.

Experiment: Set-up 5 distances to play catch and collect data.

Distance	Effort 1 (easiest) - 5 (hardest)	Observation
3 yards		
5 yard		
10 yards		
15 yards		
20 yards		

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Name: _____

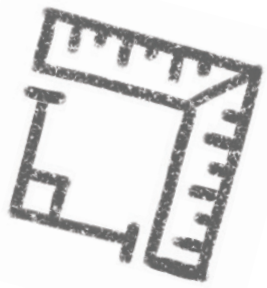
Catch Me If You Can

GRADES K-2

Analyze:

1. Which distance was easiest? Which distance was the hardest?

2. Does the ball you used matter?



3. What other factors contributed to your findings?

Report:

1. Look back at your hypothesis, were you correct?

2. Based on your experiment, what is the ideal distance to play catch? What factors influenced your answer?

Name: _____

Basketball Matters

GRADES K-2

Flat ball:

	Observation
Color	
Texture	
Ability to stretch	
Ability to bounce	

Inflated ball:

	Observation
Color	
Texture	
Ability to stretch	
Ability to bounce	

Name: _____

Design a Shoe

GRADES K-2

Have students observe the below shoes images.

How have shoes changed over time (technology vs. innovation)? What is new? What is the same?

Teacher note: Younger students may verbalize their responses.

Shoe	Observations with numbers	Observations with words	Inference about why there was a design change
			
			
			
			
			

Name: _____

Design a Shoe

GRADES K-2

Design your shoe in the box below:

Describe your shoe:

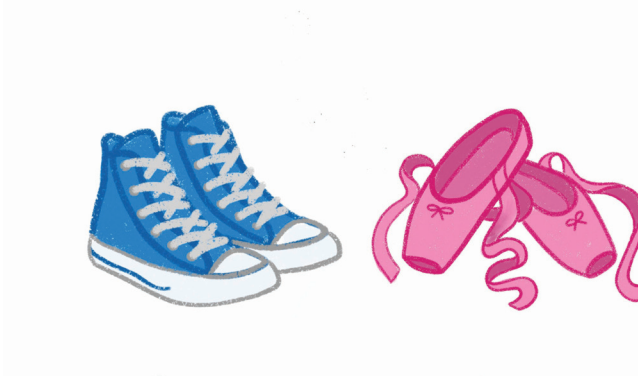
Name: _____

Design a Shoe

GRADES K-2

Describe your shoe:

Shoe	Material	Reason
Sole		
Covering		
Laces		
Height		



Name: _____

Design a Shoe

GRADES K-2

Shoe Name: _____

What are your shoes designed for (sport, dressing up, causal, etc.)?

If you were to sell your pair of shoes, what would the cost be and why?

Name: _____

Finding the Sweet Spot: Force of a Golf Swing

GRADES K-2

Review and complete the following with students:

1. If the force of a golf swing is stronger, the ball will go a **farther** or **shorter** distance.

2. The angle of the golf club's face affects the ball's **distance** or **direction**.

Name: _____

Engineer a Hole-In-One

Design your Hole-In-One:

Once students have designed (drawn) his/her "Hole-In-One", have them construct their design using available classroom materials (books, boxes, paper towel rolls, etc.).

Students are encouraged to make adjustments as they test their designs, as engineers often make adjustments.