



**Players:** Elementary and middle school students use their own individual log-in.

**Field:** Can be used as a stand-alone curriculum or as a supplement to reinforce concepts in classrooms, after school programs, camps, or at home.

**Game time:** There are 8 STEM training games that use math and science to train the baseball team's players and raise their stats. Each interactive lessons takes approximately 20 minutes plus unlimited experiential and exploration play time.

**The Dragons team:** With 8 in-game team members, a mascot, and in-game cousin, the individual player helps the team raise their stats, complete training games, and defeat the villains, The SUITS. The narrative-based game with a plot and characters enhances understanding and connection to learning and the fun.

**Equipment:** Can be downloaded and played on most phones, Chromebooks, and tablets (Apple and Android). Players do not need to be connected to wifi to play.

**Home run:** Content maps to 4 STEM motivation objectives, 11 math standards and 4 science standards. See the lesson map below for details.

**7<sup>th</sup> Inning Stretch:** Between training games, users can explore the interactive stadium – clicking around to collect coins and unlock hidden features. Each attraction has an explorable area, three puzzles to complete, and a unique story about a teammate.

**Score:** After completing all training games three times, it's time to play The Big Game. Users can then go back and explore, play "free mode" activities, unlock customizations, finish attractions, and learn more about their teammates.

**Extra innings:** To reinforce learning after completing a training game on their own, students can discuss these collaborative learning extension questions

- ⦿ In this training game, how did you start to solve the problem?
- ⦿ How did the Dragon's team member improve their stats?
- ⦿ What other ways could you help the team?



<p>TICKET NO.0123</p> <p><b>ADMIT ONE</b></p> <p><b>\$4.99</b></p>	<p><b>TERMS AND CONDITIONS</b></p> <ul style="list-style-type: none"> <li>• Created by dfusion Inc. and Science of Sport</li> <li>• Funding from the National Institute of General Medical Sciences (Grant No. R44GM130278)</li> <li>• Based Science of Sport's Science of Baseball curriculum</li> </ul>
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# STEMadium Training Games: Lessons Map

\*All players start with the Basics of Baseball and then can proceed to any lesson



	Science Standards				Math Standards										STEM Objectives				
	MS-LS1-8	PS3.C	3-PS2-2	4-PS3-1	4.MD.C.6	4.NF.B.3.A	5.G.1	5.G.A.2	5.MD.A.1	5.NBT.A.4	5.OA.A.1	6.EE.A.2.B	6.EE.B.6	6.GA.1	6.RP.A.2	Interest	Value	Careers	Confidence
<b>Basics of Baseball*</b> <ul style="list-style-type: none"> <li>Use axes to graph points on a plane</li> <li>Identify the formula for area of a triangle</li> <li>Calculate the area of a triangle</li> </ul>							+	+						+		+			
<b>Launch Angle</b> <ul style="list-style-type: none"> <li>Explore the effects of different angles and force of trajectory on distance</li> <li>Use a protractor to measure angles in whole numbers</li> <li>Explore relationship between energy and force</li> </ul>		+			+												+		+
<b>Bat Chooser</b> <ul style="list-style-type: none"> <li>Solve equations using parentheses</li> <li>Compare hitting a ball with differently weighted bats</li> <li>Convert feet to inches</li> <li>Identify equation and calculate appropriate bat weight based on height</li> <li>Round decimals to nearest hundredth and whole number</li> </ul>									+	+	+								
<b>Reaction Time</b> <ul style="list-style-type: none"> <li>Convert miles per hour to feet per second</li> <li>Calculate time it takes a baseball to reach home plate</li> <li>Round decimals to nearest hundredth and whole number</li> </ul>										+			+				+		+
<b>Nutrition for Peak Performance</b> <ul style="list-style-type: none"> <li>Determine average baseball player's required calories</li> <li>Add/subtract calories to reach a specific daily intake</li> <li>Utilize ratios, fractions, and proportions</li> <li>Identify four basic food groups</li> </ul>						+									+				
<b>Base Running</b> <ul style="list-style-type: none"> <li>Observe changes in speed, distance, and time in a variety of motion paths</li> <li>Round decimals to the nearest whole number</li> <li>Calculate the average speed for the player</li> <li>Evaluate the best path for running the bases</li> </ul>			+	+						+							+		+
<b>Seat Pricing and Revenue</b> <ul style="list-style-type: none"> <li>Identify seat pricing in different areas of the stadium</li> <li>Solve equation for unknown numbers using a multipart equation</li> <li>Describe revenue elements (pricing of seats, merchandise, food, parking)</li> </ul>											+	+	+				+		
<b>Physiology of baseball</b> <ul style="list-style-type: none"> <li>Analyze biomechanics (force, motion, speed/velocity)</li> <li>Examine force of transferring energy between objects</li> <li>Recognize how/where pitching puts stress on the body</li> <li>Differentiate the stages of pitching motion</li> <li>Explain how the brain and body reacts to stimuli</li> </ul>	+	+																+	

