

TECHNOLOGICAL ADVANCEMENTS



FROM THEN TO NOW Technology is a word that describes the knowledge, devices, and materials used to solve problems. From the first televised game in 1939, technology has had a huge impact on professional football. The on-the-field impact of technology can be seen in every aspect of the game, from communication between players and coaches to the equipment the players use on the field. It is also important to recognize the ways technology has impacted football fans. Now more than ever, fans have more access to information about their favorite team and can experience a game in different ways thanks to technology. Below are a few examples of technology that has impacted football.



ACTIVITY

After reading the table below, select which helmet matches each description. Click each box to enter date of helmet

	1940s	1950s	1970s	2000s	TODAY
Logo Design	Uniform leather helmets with plastic shell top	Red plastic shell (49ers introduce helmet logo in 1962)	Gold plastic shell with interlocking cherry red SF logo	Gold plastic shell with interlocking darker red SF logo	Gold plastic shell with interlocking cherry red color SF logo
Helmet Materials	Hard leather	Plastic	Plastic	Polycarbonate	Molded polycarbonate
Interior Features	Foam and ear holes for better communication	A radio was put into the helmet for the first time	Air bladder padding for added comfort and protection	Impact absorbing foam interior; a well established radio system now standard in all helmets	Cranial scan and 3-D printed interior is used to create a customized fit
Exterior Features	The chin strap was implemented	A single face bar was added	Full face mask is added featuring several bars rather than a single bar	A more spherical design to the overall helmet shape	Chin straps contain shock-detecting sensors to measure impact; multiple companies with various shell designs



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EQUIPMENT EVOLUTION ▼

HELMETS

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Technological advancements of helmets have come a long way since the original invention in 1869. New innovations have been implemented over the years to address any problems that players have experienced.



THE FAN EXPERIENCE

Technology is improving the 49er fan experience at Levi's® Stadium. One of those technologies is the 49ers app. On the app, you can access your digital tickets which is environmentally friendly, as well as access pictures, videos and articles about your favorite team. You can also find food choices within the stadium, and can even get directions to help find the best travel route to and from the game.



ACTIVITY Use the **49ers app** to access a map of Levi's® Stadium, or find one online with a compass, to answer the following questions. Open app ☰ > MORE > EXPLORE STADIUM > GENERAL STADIUM OVERVIEW

- 1 Levi's Stadium is on the corner of Tasman Dr. and _____
- 2 If I'm at the Levi's 501 club, which direction is the Press Level?
- 3 What is the name of the creek to the West of the stadium?
- 4 Discuss with a teammate, and take notes: Why are open-air NFL stadiums, like Levi's Stadium, oriented North to South?



HINT: Think about the Sun moving across the sky

