

# Virtual Field Trip Educator Guide

**Title:** Game Plan for the Future: A Virtual Field Trip with the NBA

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## Overview

In this Virtual Field Trip (VFT) students will be introduced to experts and athletes with a passion for protecting the environment and gain an inside look at unique NBA locations. Students will visit the homes of the Golden State Warriors and the Orlando Magic to learn how these basketball arenas are efficient, eco-friendly, and Leadership in Energy and Environmental Design (LEED) Gold-certified. ---

In the activities that follow, students will leverage their curiosity before viewing the VFT to consider the ways all community members can make a positive impact on their environment. As they watch the VFT, students will track the innovative new technology and designs that arenas are using to reduce their impact on the environment, as well as the ways in which NBA players and experts are doing their part. Finally, students will work together to explore how the innovative thinking and technology they have seen throughout the VFT could be applied to their home, school, or community.

**Grade Level:** 3<sup>rd</sup> – 8<sup>th</sup>

## Lesson Objectives

Students will be able to

- **Reflect** on what it means to have a positive impact on the environment and how they can do their part.
- **Identify** new technologies that are being used by organizations like the NBA to reduce their impact on the environment.
- **Create** their own innovative design that shows how the technology they have seen can have a positive impact on the environment.

## Curiosity Questions

- How can I play a role in making a positive impact on the environment?
- What new technologies are being used to reduce negative environmental impacts?
- Why is protecting the environment everyone's responsibility?

## Materials

- Game Plan for the Future: A Virtual Field Trip with the NBA
- Handout: VFT Notetaker
- Handout: LEED Goals (Pt 1 and 2)
- Chart paper or posterboard

## Teacher Preparation

- Before the start of class, write the discussion questions on posterboard or chart paper and place around the room. Group size may vary, but usually three to four students works best.
- The silent discussion activity is an inclusive strategy that allows all students in the group to participate without having to wait on others or talk over one another. Remind students that the discussion takes place on paper.

## Pre-Viewing Activity

Before showing the VFT to your students, use the following activity to spark students' curiosity about the important terms and concepts they will see during the video. Students will use this information in the post-viewing activities as well.

## Procedure

- Share with students that in a few minutes they are going to be watching “Game Plan for the Future: A Virtual Field Trip with the NBA” that highlights how the NBA and NBA teams are using innovative designs and empowering people to make a positive impact on the environment.
- In preparation for watching the VFT, students will explore their understanding of human environmental impacts by participating in a silent discussion.
- Explain that in a few minutes, students will be working in small groups and adding their perspectives to a few discussion questions placed around the room.
  - *How can people change their environment?*
  - *How can I have a positive impact on the environment around me?*
  - *How might new technology help make a positive difference for the environment?*

- Using one of the posterboard or chart paper stations placed around the room, students will write down their responses to the question by either writing words, sentences, or symbols. A few ways to communicate at the station include:
  - sharing your ideas.
  - elaborating on others' ideas.
  - commenting on what others have written.
  - asking others to respond with more detail.
- As students are working, join in the groups by writing clarifying questions, affirmations, or additional thoughts to keep conversations going.
- When complete, invite students to rotate around the room observing other conversations had across the class. After students have listened to the other conversations, hold a class discussion that helps highlight students' understanding of the ways they impact the environment.
- Finally, pass out a copy of the **VFT Notetaker** to each student. As students review the handout topics and help answer any clarifying questions. Share that they will be using the Notetaker after the VFT is complete.

## Post-Viewing Activity

After viewing the VFT, students will discuss what they learned from the video and then explore ways they can apply their new learning. Using the LEED Certification categories from the VFT, students will consider modifications that could be made to places they visit regularly to improve their environmental impact.

- After viewing the video, provide students with a few minutes to finish their Notetaker. Invite students to share important ideas from each of the categories. As students share, help clarify challenging vocabulary words or connect themes across students' ideas.

### **Educator note:**

Explain to students that one important theme from the video is the role everyone plays in positively impacting the environment. This means individuals, communities, and businesses must work together to ensure they are protecting the environment. This might mean changing small daily habits, working together on a community clean-up, or helping to create innovative new technologies and designs, like they saw in the VFT, to reduce negative impacts.

- Next, students will revisit the LEED Certification criteria that was mentioned during the VFT. Distribute the **LEED Goals handout** to students and have them read the "Did you know" section at the top. Ask students to consider how this description is connected to what they saw during the VFT.
- Remind students that using the LEED goals or criteria is like a report card for buildings or public spaces. These elements are important when taking a closer look at spaces we live, learn, and work in.
- Have students read through a few LEED goals and choose a place like their school or home. Encourage them to consider how the LEED goal might be applied. This could mean redesigning the space or features or adding new technology. Finally, students can use the information, along with designs or features seen during the VFT, to sketch out a diagram showing how the new features or designs would be applied.

**Educator note:**

For younger students, you may choose to move directly to part two of the handout where students can draw their designs and consider clarifying questions.

- As students finish, invite them to share their ideas with the class and discuss the innovative ideas that the group created.
- As an extension exercise, consider having the class develop ideas that could make their school more environmentally friendly. As students consider practical ideas, have them share with other educators and the school's administrative team.

## Standards and Frameworks

### NGSS

**5-ESS3-1:** Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.


**MS-ESS3-3:** Apply scientific principles to design a method for monitoring and minimizing a human impact on the environment.

### C3 Framework


**D2.Geo.8.6-8.** Analyze how relationships between humans and environments extend or contract spatial patterns of settlement and movement.

**D2.Geo.4.6-8.** Explain how cultural patterns and economic decisions influence environments and the daily lives of people in both nearby and distant places.

## Handout: VFT Notetaker

	<p><b>Terms or ideas that I have questions about</b></p>
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	<p><b>Interesting new technology or designs I saw</b></p>
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	<p><b>New perspectives or ideas I heard</b></p>
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## Handout: LEED Goals (Pt. 1)

### DID YOU KNOW?

*LEED (Leadership in Energy and Environmental Design) is a complete system that doesn't just focus on one building element, such as energy, water or health. Instead, it looks at the big picture, factoring in all critical elements that work together to create the best building possible.*

### LEED GOALS

**Directions:** Choose a building, like your school or home, and consider how the LEED Goal could be applied. For example, what ideas do you have about how this goal would look if you could incorporate new technology or redesign the space.

#### Goal: Enhance individual human health

<p><b>What does it mean?</b> <i>Indoor and outdoor spaces factor in designs that enhance quality of health. Ex. More windows for added sunlight.</i></p>	<p><b>How could the space be improved?</b></p>
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#### Goal: Protect and restore water resources

<p><b>What does it mean?</b> <i>Reduce water waste and improve quality of water consumption Ex. Filtered water for drinking.</i></p>	<p><b>How could the space be improved?</b></p>
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#### Goal: Protect and enhance biodiversity and the ecosystem

<p><b>What does it mean?</b> <i>Buildings and spaces account for natural wildlife and plants. Ex. Reduce outdoor light pollution for birds.</i></p>	<p><b>How could the space be improved?</b></p>
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#### Goal: Reduce Waste

<p><b>What does it mean?</b> <i>Buildings and spaces consider ways to reduce waste or reuse waste. Ex. Using eco-friendly food ware.</i></p>	<p><b>How could the space be improved?</b></p>
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## Handout: LEED Design (Pt. 2)

**Directions:** Select a space to redesign, like your home, school, or a community building. Consider the questions below and then use the space provided to create a sketch of how the new design or technology could save energy, reduce waste, and improve quality of life.

### Questions to Consider

- What innovations or designs did you see during the video that you could use?
- How would your redesign support the following categories?
  - Reduce waste.
  - Reduce energy use.
  - Reduce water use.
  - Improve air quality.

