

Name/Title: Football in the Atmosphere

Academic content: Earth Science

Purpose of Event: The purpose of this activity is to provide a link between a flag football PE lesson and a lesson from an Earth Science class (levels of the atmosphere). By playing this game, students will have the characteristics of each layer reinforced and hopefully enhance the learning process.

Prerequisites: Students should have a basic understanding of the rules of flag football and have the ability to throw and catch successfully.

Suggested Grade Level: 6-8

Materials Needed:

- One flag football belt for each student
- One football per game
- 12 cones to setup endzones (layers of the atmosphere)
- Pennies or jerseys to distinguish teams

Physical activity: Throwing and Catching (Football)

Description of Idea

This game of flag football can be played in the gym or outside. Before the game begins, set up the playing area with 5 separate endzones. The endzones should essentially stack one on top of the other. For example, the back line of a given endzone, will also be the front line of the next endzone. Each endzone will represent a different layer of the atmosphere (starting from the bottom: troposphere - stratosphere - mesosphere - thermosphere - exosphere). To begin the game, the offense will get the ball on the designated line of scrimmage. To correlate with the layers of the atmosphere, the closest endzone to the offense will be the troposphere, while the exosphere will be the furthest away.

The teams will play traditional flag football, with the offense only getting 4 downs to try and score. If a player on offense catches a touchdown in an endzone, the teacher will then ask the player and/or entire team a question about the specific layer where the touchdown was caught. If the question is answered correctly, the offense will receive points based on which layer where the touchdown occurred (1 point for the troposphere, 2 for the stratosphere, 3 for the mesosphere, 4 for the thermosphere, and 5 for the exosphere). Players cannot score by running the ball into an endzone. Therefore, if the ball is caught in the third endzone, or the mesosphere, it cannot be advanced any further and 3 points will be given to the offense with a question answered correctly.

After the offense gets 4 downs, or after a turnover, the teams will switch roles.

Make sure everyone is rotating positions between plays to ensure the same person is not playing the same spot over and over, especially the quarterback!

Variations:

If the defense intercepts a pass in a given endzone, they may answer a question about the atmospheric layer and get the corresponding points with a correct answer.

End zones can be made smaller or larger based on skill level and available space.

When asking a question to a team that scored, have only the person that caught the ball try and answer the question. If the student gets it right, his or her team can receive double points. If the whole team must be used to answer a question, only regular points will be awarded to the team.

Use a bigger and softer ball instead of a football to make the skills of throwing and catching easier.

Allow students to run the ball into the first endzone, or the troposphere.

Assessment Ideas:

The assessment portion of the lesson occurs when teams catch the ball in an endzone and the teacher asks a question about the layers.

Teaching Suggestions:

The best time to have this lesson is when the science teacher is going over the layers during his or her class. Questions used for touchdowns should come straight from the students' upcoming test on the layers of the atmosphere. I am sure the science teacher would love this extra review for his or her students!

Submitted by **Kelly Lane** who teaches at Liberty Bell Middle School in Johnson City, TN. Thanks for contributing to PE Central! **Posted on PEC: 1/17/2014.**

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