

# Movement and Motion

Field Trip/Virtual Field Trip Program



## General Description / Overview

- ✓ Please use the following lesson to help prepare your students for a more meaningful and interactive educational experience.

### Desired Outcome Alignment

#### Subject / Content Area

- Science

#### National Academic Standards:

- **Science:** Motion and Stability: Forces and Interactions

#### What will students be able to do (Objectives)

- Students will study the concepts of movement, motion, and force and how they relate to football.
- Students will review how objects can be moved in a variety of ways such as straight, zig-zag, circular, and back and forth.
- Students will review how objects can be affected by pushing or pulling.
- Students will use technology to research and create examples of movement.

### Personalized Learning

#### Universal Design for Learning

- **Prior to the Program:** While students are activating prior knowledge, they will be in a small group. This is to help all students have the opportunity to activate their prior knowledge through engaging in conversation. It will also help students who may not have any prior knowledge gain some insight before the lesson from other students who may be well-versed in the topic of football and motion.
- **Prior to the Program:** While students are creating questions to ask during the program, the teacher will be the designated scribe. This will help eliminate cognitive energy students may

expend if they were required to handwrite the questions. This will allow students who struggle in the area of writing to focus their mental energy on generating questions as opposed to a potentially laborious writing process.

### **Accommodations / Modifications**

- **After the Program:** When students complete “My Pro Football Hall of Fame Movement and Motion Book,” allow students who struggle with writing to just draw a picture of the movement as opposed to writing sentences. This modification can not just be used for students who struggle with writing, but also lower grade levels such as kindergarten.

*This is the lesson component the instructor will complete before bringing students to the HOF for the field trip program.*

## **Prior to the Program (1-5 School)**

### **Time Allotted:** 25 minutes

- 5 minutes for Activating Prior Knowledge
- 15 minutes for the Activity
- 5 minutes to generate questions

### **Materials/ Resources**

- Two prepared examples (including but not limited to: pictures, videos, descriptions, etc.) of movement and motion found on ProFootballHOF.com and/or NFL.com
- A Football
- A material to transcribe and compile questions (digital or hard copy)
- Electronic devices

### **Activating Prior Knowledge**

- Ask students if they think that motion (how objects move) plays a big role in football. Discuss this in small groups.
- Have students share with the whole class things that their group discussed.

### **Activity**

- Show students the two examples you found on ProFootballHOF.com and/or NFL.com. After showing each example, elaborate on why that example shows movement.
- Lead a whole class activity where you demonstrate movement/motion/force by using a football.
  - Ask for 3 volunteers.
  - Give volunteers the football.
  - Pose a class discussion of how the three individuals can show movement by using the football.
  - Based on class discussion (vote on a demonstration if necessary), have the three individuals
  - perform the demonstration of movement with the football.
- Have a group discussion about potential questions students would like to ask about this topic in the program. The teacher will record these questions either by hard copy or electronically to form a compiled class question list. Assign students questions and give hard copies for students to reference on the day of the program.

**Assessment**

- Informally observe students' level of prior knowledge and ability to demonstrate movement/motion/force. Determine through informal observation and questioning if students are grasping the general idea of the concept enough to go to the program.

**Enrichment**

- Give students a link to a (that is pre-approved to ensure the lack of inappropriate content) clip of a football game where the players are actively playing.
- Have students (individually or in pairs) watch the clip and analyze how the movement was used in the play.
- Have students write down three observations of how movement was used in this clip.

*This is the lesson component the HOF staff will complete with students at the HOF site during the field trip program.*

### **During the Program (HOF)**

**Time Allotted:** 50 minutes

**Materials/ Resources**

- Questions that were prepared prior by students
- Examples that show the different types of movement, motion, and force

**Activities**

- (10 minutes) Welcome/Mission/Values
- (30 minutes) Discussion/Presentation and Videos on Movement and Motion
- (10 minutes) Question and Answer

**Assessment**

- Learn about the Mission/Values of the Pro Football Hall of Fame.
- Next, identify the six forms of movement that you are going to discuss (straight, zig -zag, circular, back and forth, an object being pushed, and an object being pulled).
- Have discussions and play videos that show the different types of movement, motion, and force.
- Discuss how these examples apply to the game of football.
- Encourage students to look throughout the museum to find examples of how objects move.
- Have students ask their pre-prepared questions.
- Informally observe students while the lesson is occurring. Observe if students are grasping the concepts and review any elements as needed.

**Enrichment**

- Take a tour through the HOF. While on the tour, encourage students to find examples of how objects move.
- After the tour, come back to the classroom and have students share examples that they saw in the museum.

*This is the lesson component the instructor will complete with students back at their classroom after the field trip program.*

### **After the Program (1-5 School)**

**Time Allotted:** 40-70 minutes

- 10 minutes to complete "My Pro Football Hall of Fame Movement and Motion Book."

- 30 minutes for students to create visual representations
- 10 minutes for gallery walk
- 20 minutes (if allotted) to discuss motion in relation to the change of movement or Enrichment

### **Materials/ Resources**

- “My Pro Football Hall of Fame Movement and Motion Booklet” (pages 5-6)
- Pencil and any additional coloring materials to create pictures
- Computers or materials to create posters or dioramas

### **Activities**

- Students will complete a “My Pro Football Hall of Fame Movement and Motion Booklet.” They will write sentences at the bottom of each page. These sentences can give additional details and/or definitions. Have students draw a picture to accompany and represent their sentences.
- Have students work individually or in teams to create slideshows, posters, or dioramas that represent one of the movements described in the “My Pro Football Hall of Fame Movement and Motion Booklet.”
- Once students complete their visual representations, have them display their creations and do a gallery walk with the whole class.
- **If There is Extra Time:** Discuss how the amount of change in the movement of an object depends on the mass of the object and the amount of force exerted. Have students add photos or draw pictures of objects of varying mass or varying force applied on the back page of their “My Pro Football Hall of Fame Movement and Motion Booklet.” (Ex. A kicker’s foot kicking the football would show the varying force on an object. Discuss what happens with a light kick as opposed to a hard kick.)

### **Assessment**

#### Teacher-Created Rubric

- This is for the teacher to grade the “My Pro Football Hall of Fame Movement and Motion Book.”
- Students can earn up to 6 points. Students can either score a 1 or a 0. Students receive a 1 if they can provide an example of the movement and 0 if they can’t. They have to provide an accurate example or definition of the following movements: straight, zig-zag, circular, back and forth, an object being pushed, and an object being pulled.

### **Enrichment**

- Have students discuss how these principles of movement can apply to other sports such as baseball or basketball in small groups.
- Have students create a visual representation (slide show, poster, etc.) in their groups that compares and contrasts the use of movement in football and another sport of their choosing.
- Have groups present their findings to the class.

**My Pro Football  
Hall of Fame Movement and Motion Book**

**Name:** \_\_\_\_\_

**Date:** \_\_\_\_\_



---

**This is an example of straight movement.**

---

**This is an example of zig-zag movement.**

---

**This is an example of circular movement. This is an example of back and forth movement.**

---

**This is an example of an object being pushed. This is an example of an object being pulled.**