

# 'TEAM BUILDING' DRONE COMMANDERS

MASTERING MOVEMENT AND COMMANDS



## Objective

Students will learn and apply the concepts of pitch, roll, throttle, and yaw in drone movements, integrating direction and quantity terminology into physical activities and a team-based obstacle course challenge.

## Materials Needed

- **Classroom space for movement**
- **Blindfolds**
- **Obstacle course materials (cones, chairs, etc.)**
- **Timer**
- **Reward for winning team (optional)**

## Resources:

- 1: [Introduction to Drone Movements \(Presentation\)](#).
- 2: Drone Commanders (Page 2)

## Lesson Steps:

1. Use Resource 1: “Introduction to Drone Movements (Go through this as a class, in groups, or individually)
2. Use Resource 2 to guide class through warmup and activity. 45 MIN  
LESSON
3. Use Resource 3 for extension ideas. 45 MIN  
LESSON

## Questions to ask:

- What are the four primary movements of a drone, and how does each one affect the drone’s flight?
- How does changing the pitch of a drone affect its direction of movement?
- Why is it important to differentiate between movement (like pitch) and direction (like up or down)?
- Can you give an example of a command that combines movement, direction, and quantity?



**Lesson Overview:** Welcome, Drone Commanders! Today's mission is to master the art of drone dynamics through understanding Pitch, Roll, Throttle, and Yaw, and to apply these concepts in a fun, interactive obstacle course challenge.

## 1. Classroom Movement Activity:

- Instruct students to apply the drone commands to their body movements. This can include steps, jumps, and turns.
- Examples: "Roll to the right 3 steps", "Yaw counterclockwise 180 degrees".
- Ensure each command includes quantity for clarity and fun.

## 2. Setting Up the Obstacle Course:

- Divide the class into teams of three or four.
- Send one team member (the navigator) from each team to another room or the hallway.
- Set up a simple obstacle course in the classroom with the remaining students.

## 3. The Drone Dynamics Challenge:

- Blindfold the navigators and bring them to the course.
- The remaining two or three team members will guide the blindfolded navigator using only the proper drone command terminology.
- If incorrect terminology is used, the navigator restarts from the beginning, but the timer continues.
- Add 3 seconds to the team's time for each obstacle bumped into.
- Emphasize verbal communication, following directions, and accuracy.

## 4. Debrief and Reflection:

- Discuss what strategies worked best and how the activity relates to controlling a drone.
- Award the winning team and acknowledge all students' efforts.

*Teacher's Note: Perform a practice round in front of the class before starting the challenge to demonstrate how it's done. This activity not only teaches students about drone movements but also enhances their communication skills and understanding of precise instructions, which are crucial in drone operation.*