



Best Practices

How NOT to Make and Use a Lesson Plan

(Most People Get This Wrong)

Best Practices

How NOT to Make and Use a Lesson Plan

What We Will Cover

Purpose of a Lesson Plan



CFI Bootcamp
Flight Instructor Training

CFI Bootcamp
Flight Instructor Training

How NOT to Make and Use a Lesson Plan

What We Will Cover

Who is the Lesson Plan For?

How NOT to Make and Use a Lesson Plan

What We Will Cover

Checkride vs. Real Student Lesson Plans

How NOT to Make and Use a Lesson Plan

What We Will Cover

What to Avoid

How NOT to Make and Use a Lesson Plan

What We Will Cover

How to Use a Lesson Plan Using PowerPoint or Keynote

How NOT to Make and Use a Lesson Plan

Purpose

It's an outline of what you are to accomplish in the lesson

How NOT to Make and Use a Lesson Plan

Purpose

It is NOT supposed to teach you anything

How NOT to Make and Use a Lesson Plan

Purpose

Teaching is different for every student – Your plans change

How NOT to Make and Use a Lesson Plan

Purpose

Have three versions of your lesson plan:

How NOT to Make and Use a Lesson Plan

Purpose

Checkride “Show me everything” lesson plan

How NOT to Make and Use a Lesson Plan

Purpose

Preflight briefing plan – Student has taken ground school

How NOT to Make and Use a Lesson Plan

Purpose

Includes "What and How" not "Why"

How NOT to Make and Use a Lesson Plan

Purpose

Evaluation Lesson Plan – Standards and Outline

How NOT to Make and Use a Lesson Plan

Who is the Lesson Plan For?

It's not to be given or shown to the student

How NOT to Make and Use a Lesson Plan

Who is the Lesson Plan For?

It's a guide for you to be sure you covered everything

How NOT to Make and Use a Lesson Plan

Who is the Lesson Plan For?

If you try to talk while showing it to them they hear - 0

How NOT to Make and Use a Lesson Plan

Who is the Lesson Plan For?

A strong supporting image is what is needed

How NOT to Make and Use a Lesson Plan

Checkride vs. Real Student Lesson Plans

Checkride Lesson Plans don't work on real students!

How NOT to Make and Use a Lesson Plan

Checkride vs. Real Student Lesson Plans

Assumes you are giving ground with the flight lesson

How NOT to Make and Use a Lesson Plan

Checkride vs. Real Student Lesson Plans

They take too long to get through – Typically 15-20 min

How NOT to Make and Use a Lesson Plan

Checkride vs. Real Student Lesson Plans

Real student lesson plans are Preflight briefings – 5 min

How NOT to Make and Use a Lesson Plan

What to Avoid

Sentences on slides

How NOT to Make and Use a Lesson Plan

What to Avoid

TMI – Too much information

How NOT to Make and Use a Lesson Plan

How to use a lesson plan with Keynote or PowerPoint

Dark Background

How NOT to Make and Use a Lesson Plan

How to use a lesson plan with Keynote or PowerPoint

Bright - Monitor becomes the presentation – Instead of you

How NOT to Make and Use a Lesson Plan

Example

Example of a Dark Background – Eyes Relax

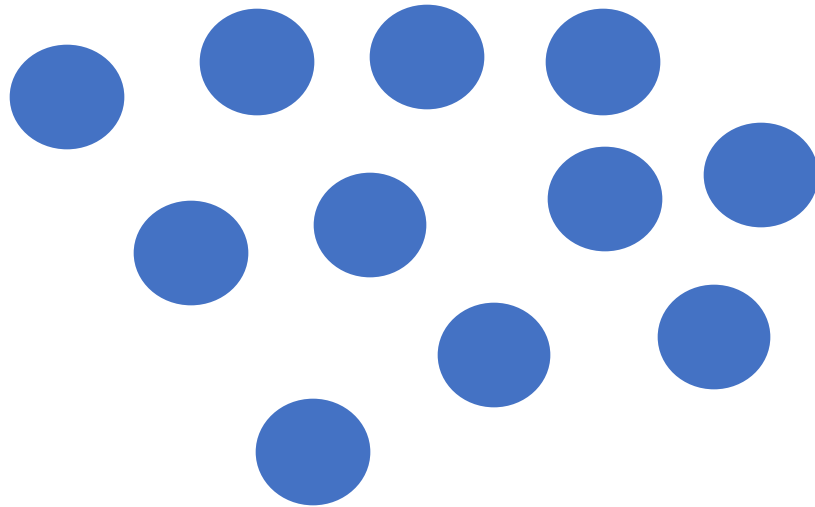
How NOT to Make and Use a Lesson Plan

How to use a lesson plan with Keynote or PowerPoint

One message per slide

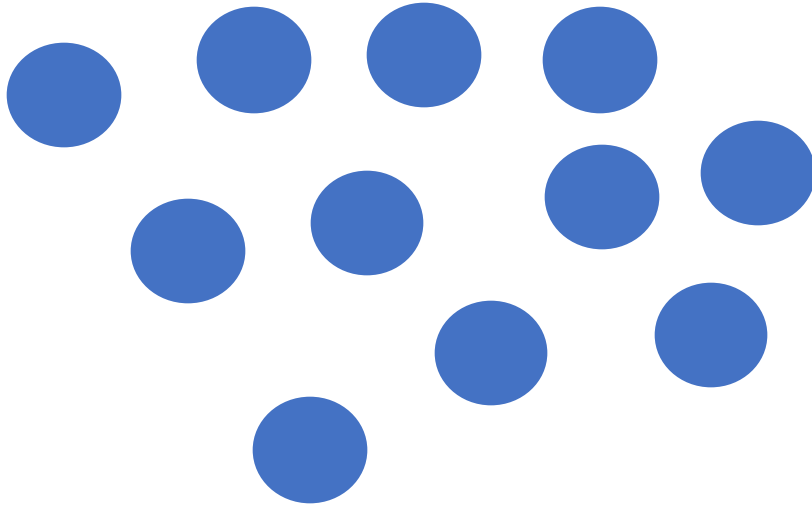
How NOT to Make and Use a Lesson Plan

Number of Objects Per Slide – Count the number of balls and see how long it takes.



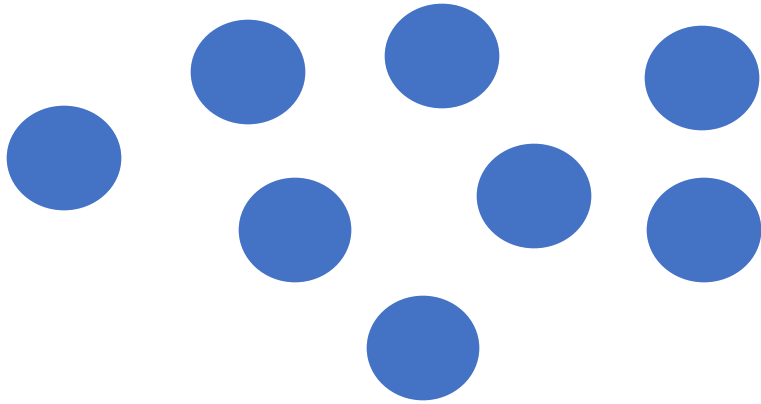
How NOT to Make and Use a Lesson Plan

Approximately 2 seconds



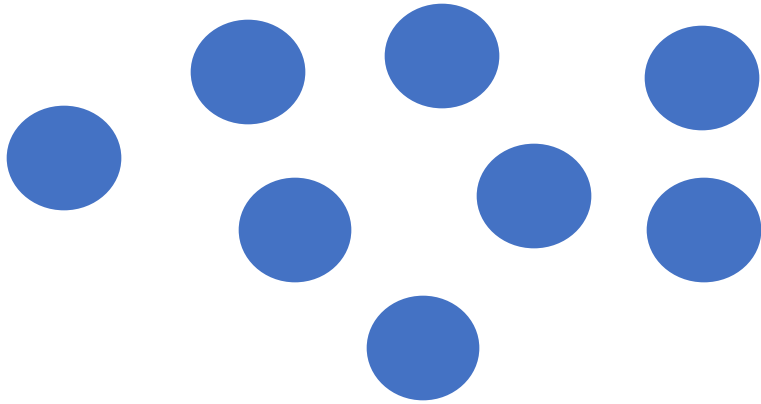
How NOT to Make and Use a Lesson Plan

Count them again and note the time it took



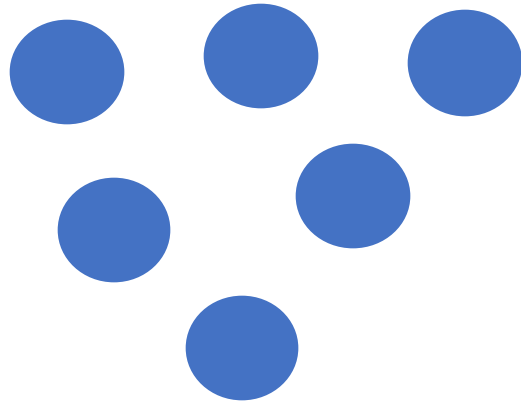
How NOT to Make and Use a Lesson Plan

Approximately 1.2 seconds



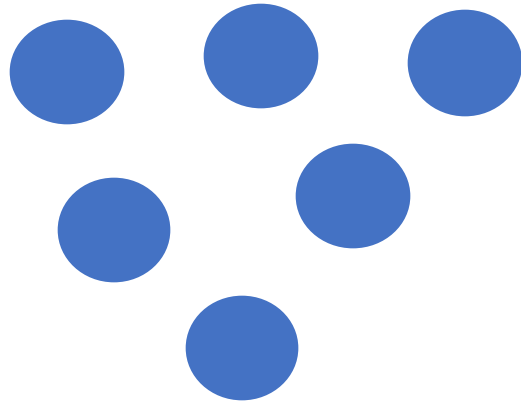
How NOT to Make and Use a Lesson Plan

Count them a last time and note the time it took



How NOT to Make and Use a Lesson Plan

Nearly instantaneous



How NOT to Make and Use a Lesson Plan

How to use a lesson plan with Keynote or PowerPoint

No more than 6 objects per slide

How NOT to Make and Use a Lesson Plan

How to use a lesson plan with Keynote or PowerPoint

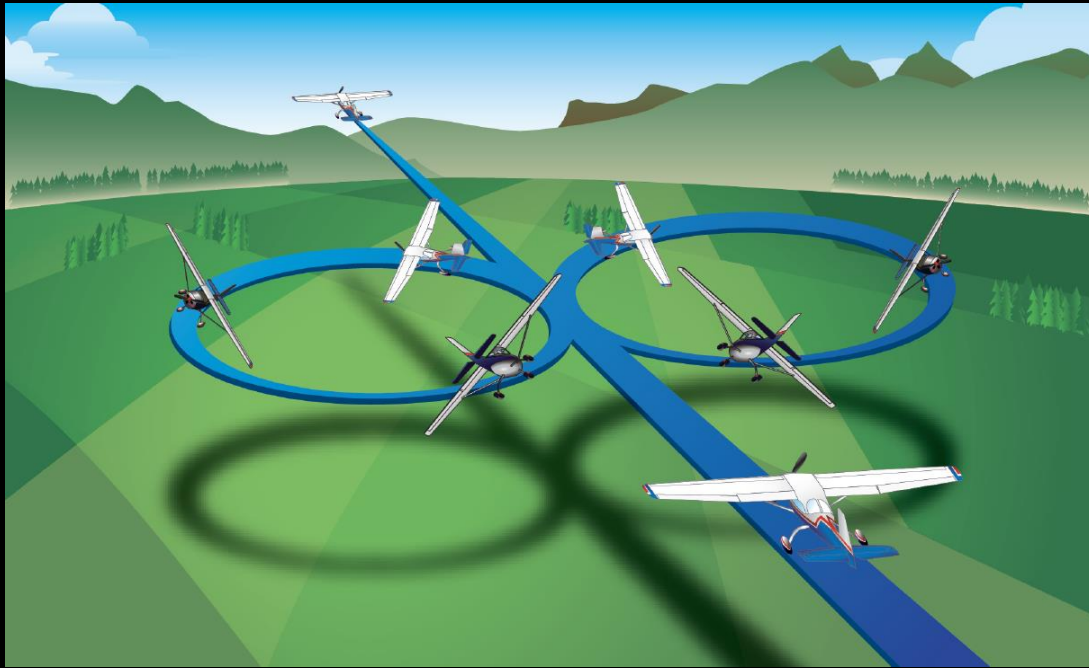
Procedures – Don't project all at once – reveal as you go

How NOT to Make and Use a Lesson Plan

How to use a lesson plan with Keynote or PowerPoint

Use meaningful images – Reduce text and steer focus

Bad Example - Steep Turns



A 360° turn in both directions while maintaining altitude, airspeed and coordination.

Can be used to avoid terrain, weather, another aircraft or when undershooting a runway.

ACS standards are +/- 100 ft, +/- 10° heading, airspeed +/- 10 knots.

Vertical component of lift is decreased so additional back pressure will be need.

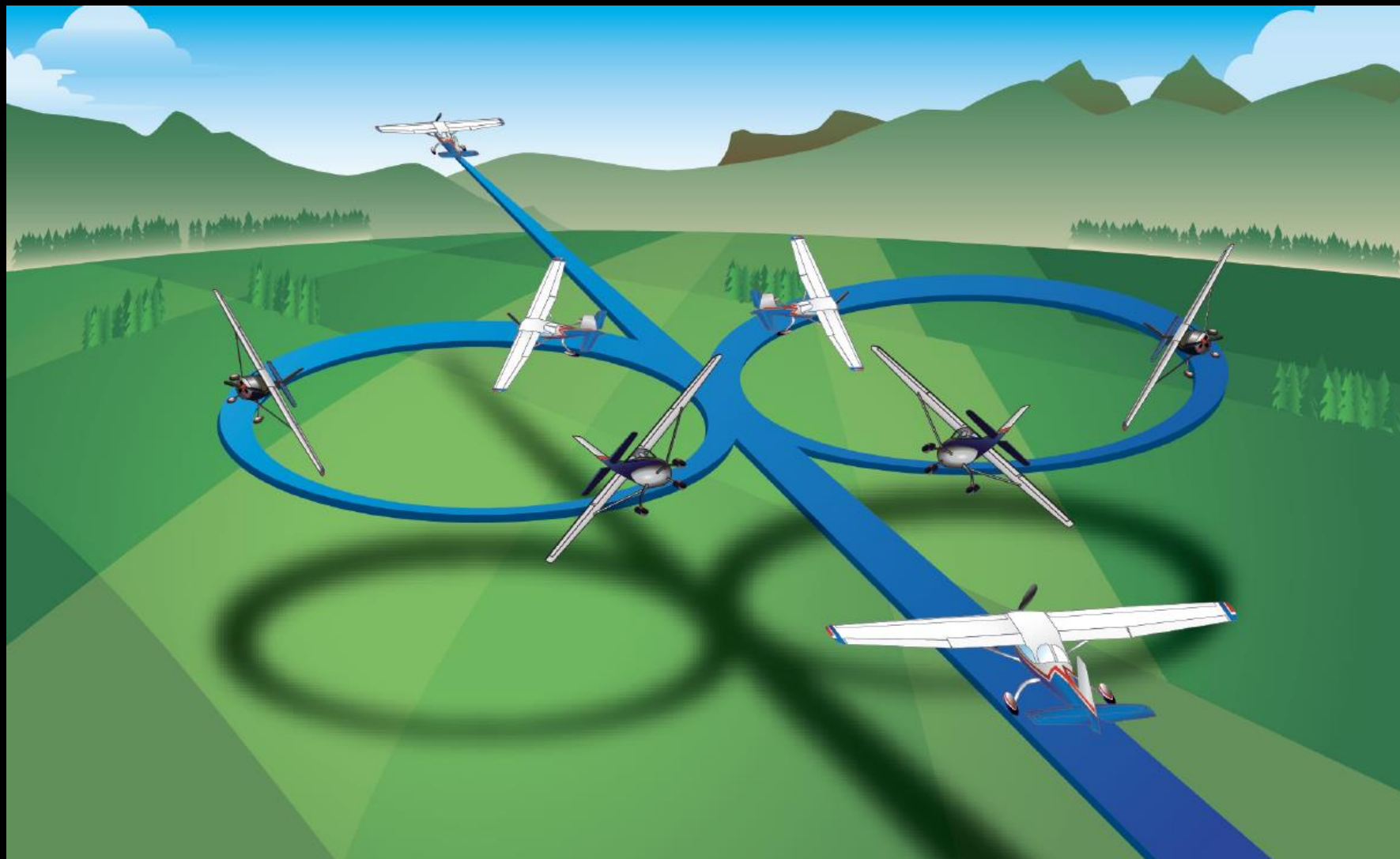
More induced drag due to more back pressure must be overcome by adding power to maintain the airspeed.

Overbanking will occur after 30° of bank and some opposite aileron will be required to maintain the bank.

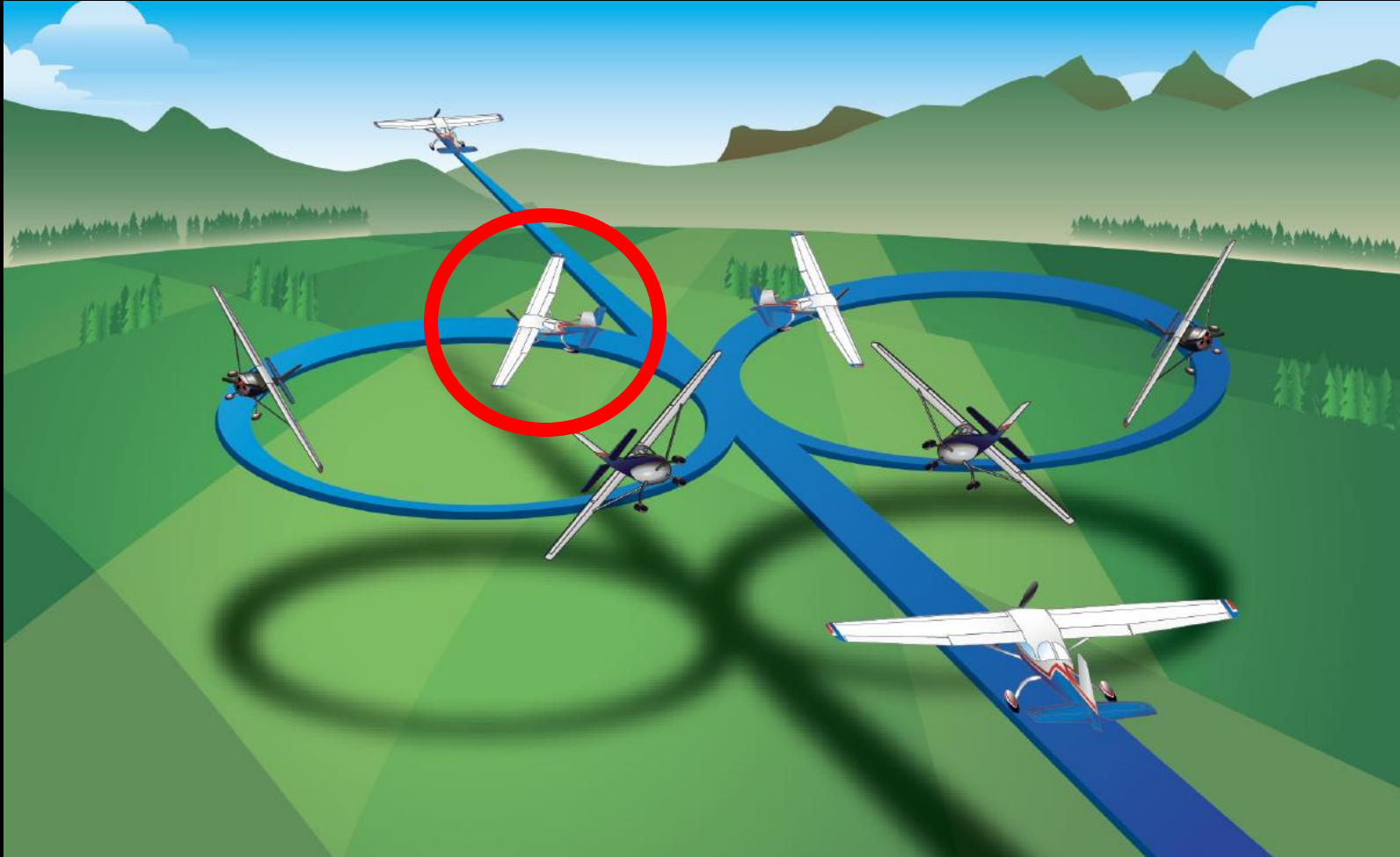
Adverse yaw will need to be overcome initially by coordinated use of aileron and rudder while the ailerons are being deflected.

In the turn P-factor, torque and slipstream require right rudder in both directions of the steep turn.

Good Example - Steep Turns

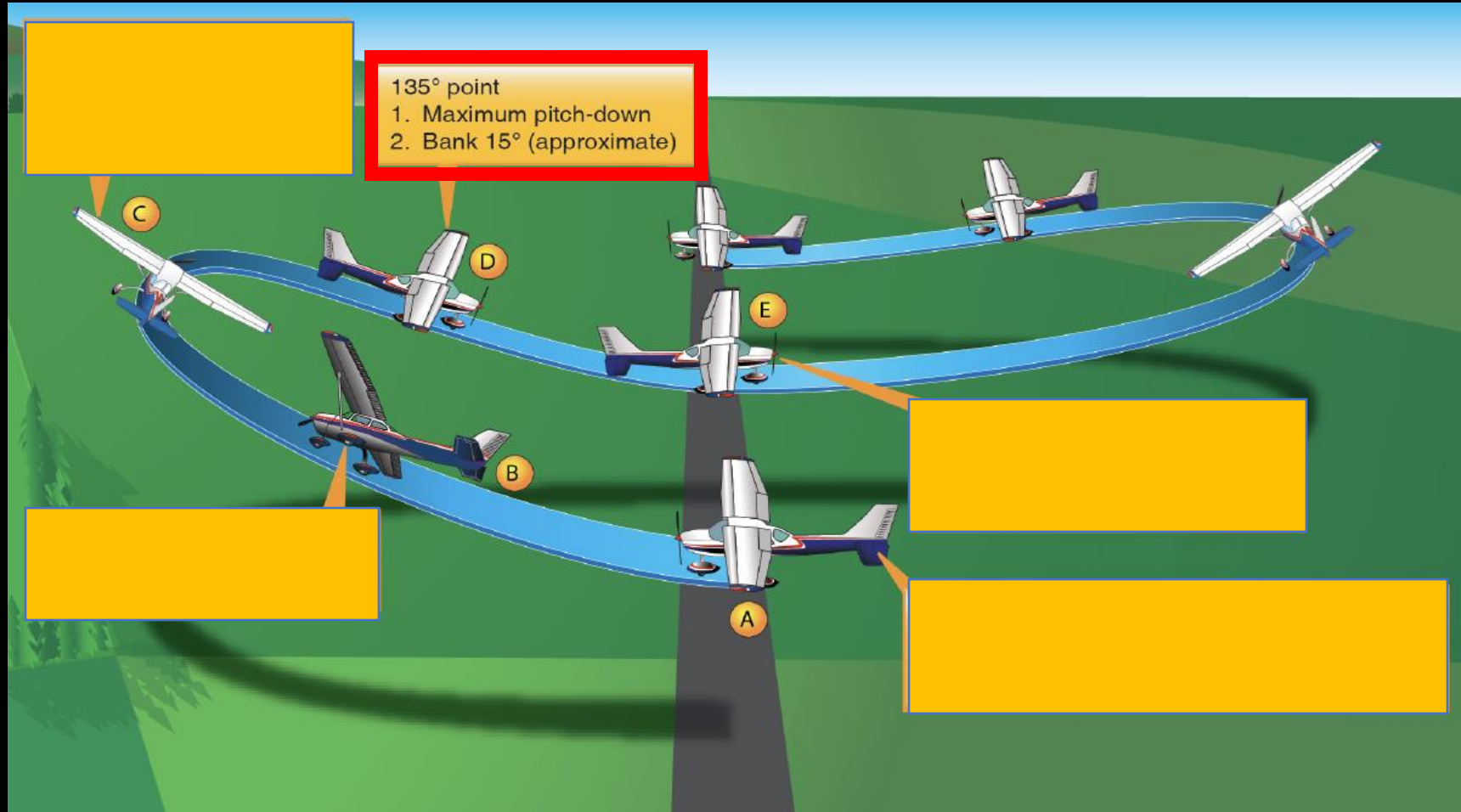


Using Contrast to steer focus



Turn in the other direction

Using Contrast – Shows Relationships and Controls Reading



How NOT to Make and Use a Lesson Plan

How to use a lesson plan with Keynote or PowerPoint

Biggest thing to Remember – REDUCE what is shown

How NOT to Make and Use a Lesson Plan

How to use a lesson plan with Keynote or PowerPoint

The more items show the more the student reads and doesn't listen to you

How NOT to Make and Use a Lesson Plan

Bad Lesson Plan Example

How:

1. Hypoxia

- A. Hypoxia means “reduced oxygen” or “not enough oxygen”
 - i. The greatest concern is with getting enough oxygen to the brain, since it is particularly vulnerable to oxygen deprivation
 - ii. Hypoxia can be caused by several factors including:
 - a. An insufficient supply of oxygen
 - b. Inadequate transportation of oxygen
 - c. Inability of the body tissues to use oxygen
- B. Hypoxic Hypoxia
 - i. A result of insufficient oxygen available to the lungs
 - ii. A blocked airway or drowning are examples of how the lungs can be deprived of oxygen
 - iii. For Pilots: The reduction in partial pressure of oxygen at high altitude is a common example
 - a. Partial Pressure is the amount of pressure that a single gas (out of a mixture) contributes to the total pressure
 - iv. Although the percentage of oxygen in the atmosphere is constant with changes in altitude, the partial pressure decreases as altitude increases
 - a. As you ascend, the percentage of each gas remains the same, but the molecules no longer have the pressure required to drive oxygen into the respiratory system
 - b. The decrease of oxygen molecules at sufficient pressure leads to hypoxic hypoxia
- C. Hypemic Hypoxia
 - i. Occurs when the blood is not able to take up and transport sufficient oxygen to the cells in the body
 - ii. Hypemic means “not enough blood”
 - iii. This type of hypoxia is a result of oxygen deficiency in the blood

How NOT to Make and Use a Lesson Plan

Good Lesson Plan – “Obviously!”

Aerodynamics - Lift, Drag and Wing Planform

CFI LESSON PLANS



Objective

To understand the aerodynamic concepts of how an airplane can overcome its own weight and understand how resistance to its movement is generated and managed.

Motivation

An airplane must overcome its weight to fly and must be able to move through the air in order to do it. An understanding of these aerodynamic concepts/forces allows the pilot to understand how to anticipate and manage these forces.

Presentation: 45 Minutes

Airplane Components to Introduce:

1. Fuselage – Airplane minus the wings and stabilizers – contains the cabin, engine, etc.
2. Airfoil – Generates force to overcome weight.
3. Horizontal Stabilizer – Allows the airplane to be controlled to balance the effect of the airfoil.

The Four Forces:

1. Weight
2. Lift
3. Thrust
4. Drag

Lift and Weight

1. For an airplane to fly it must overcome its weight. Weight is always directed downward.
2. The force created to overcome weight is called lift.
3. Newton's Third Law – Reaction.
4. Bernoulli's Principle – Relationship of Pressure and Velocity.
5. Airfoil components.
6. Show restricted pipe and relate it to an airfoil.
7. Relative wind – Parallel and opposite the flight path.
8. Angle of attack of the airfoil – Larger AOA increases the path on the top of the airfoil = more velocity = increase in lift.
9. Lift equation – $Lift = PV^2SC_L / 2$ – Lift increases at the square of the velocity.

How NOT to Make and Use a Lesson Plan

Resources:

[Flight Instructor Lesson Plans - 4th Edition](#)

[Teach Brief-Fly! - Lesson Plans/Preflight briefings and What to Say](#)

[Teach Brief-Fly! - Student Companion Guide](#)