



## Work-Based Learning Experiences



Session Time: Two, 50-minute sessions

### DESIRED RESULTS

#### ESSENTIAL UNDERSTANDINGS

The aviation industry provides a multitude of pathways to pursue a career as a pilot. (EU6)

#### ESSENTIAL QUESTIONS

1. What type of work-based learning opportunities exist for me?
2. How will I learn if this is a career I wish to pursue in the future?

#### LEARNING GOALS

##### Students Will Know

- The different types of work-based learning experiences that exist for high school students

##### Students Will Be Able To

- *Differentiate* among various work-based learning experiences available. (DOK-L3)
- *Construct* a plan to participate in work-based learning experiences. (DOK-L3)

### ASSESSMENT EVIDENCE

#### Warm-up

Students will write and share three questions they'd like to ask an aviation professional about their job.

#### Formative Assessment

Students will use the Internet to find videos with information about a particular work-based learning experience. Students will synthesize what they learn into a one-page summary, then discuss their findings as a class.

#### Summative Assessment

Students will complete a pro/con chart of the three different work-based learning experiences. They will use the chart to evaluate which learning experience is best for their career goals.

### LESSON PREPARATION

#### MATERIALS/RESOURCES

- [Work-Based Learning Experiences Presentation](#)
- [Work-Based Learning Experiences Student Activity 1](#)

- [Work-Based Learning Experiences Student Activity 2](#)
- [Work-Based Learning Experiences Teacher Notes 1](#)
- [Work-Based Learning Experiences Teacher Notes 2](#)

## LESSON SUMMARY

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The lesson will begin with a warm-up in which students list three job-specific questions they would like to ask an aviation professional. These questions will lead into a discussion of how students might get answers through work-based learning experiences. Students will then learn about the three main types of work-based learning (job shadowing, internships, and apprenticeships) before taking the formative assessment in which they conduct research about one of the three types of work-based learning.

Next, students will review general tips for locating work-based learning opportunities and presenting themselves as a professional while “on site.” Finally, students will take the summative assessment in which they will evaluate the pros and cons of each type of experience and draft a plan for locating a work-based learning opportunity for an aviation profession they are interested in pursuing.

## BACKGROUND

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The aviation profession can seem somewhat cloistered due to its specialized nature and the security procedures that are often in place. Those who do not know someone in the career field may have difficulty obtaining insight into the profession. Many students with interest in aviation may not know much about careers in the industry or even how to find such information. Like other professions, however, the aviation field needs young, interested individuals to enter the workforce, meaning aviation companies are often quite willing to participate in learning experiences that expose students to the profession (and to that company’s virtues in particular). Job shadowing, internships, and apprenticeships are three means through which many students come to know people in and understand the workings of the aviation profession.

## MISCONCEPTIONS

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Students may think that a career in aviation means being a pilot. In fact, aviation encompasses a wide variety of careers. In addition to manned and unmanned pilots there are positions in the FAA, air traffic control, the military, maintenance, engineering, aircraft design and development, and many more.

If you visit an aviation company or an airport, you’re likely to see high fences, locked gates, and security guards. Those precautions are intended for public safety and protection, and may make it seem like aviation professionals are hard to approach. However, the opposite is generally true. Most aviation professionals love to share their passion with others, especially young people who may be interested in joining that profession one day. So, as you consider and prepare for work-based learning opportunities, don’t let misconceptions deter you from getting to know aviation professionals.

Also, some parts of the aviation profession may seem very technical. It is true that certain fields require significant technical knowledge: for example, engineering and mechanical work. However, strong technical knowledge is not a requirement for every aviation profession. It is not uncommon, for example, for pilots or air traffic controllers to have degrees in the humanities (English literature, history, etc.) rather than a hard science. As you have the opportunity to do work-based learning, feel free to ask your hosts about their academic backgrounds—you might be surprised!

## DIFFERENTIATION

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To support student motivation and goal-setting in the **EXPLAIN** section, offer students free study time to research work-based learning experiences and/or to learn about local organizations that can help them in achieving their 2-year plan. To support student motivation in the **EXPLAIN** section, invite guest speakers to your session to give students an opportunity to gain insight into what it’s like to complete work-based learning. Guest speakers may include local mentors and/or former students who have completed such a program.

## ENGAGE

**Teacher Material:** [Work-Based Learning Experiences Presentation](#)

**Slides 1-3:** Introduce the topic and learning objectives of the lesson.

**Slide 4:** Conduct the **Warm-Up**. The slide presents the Warm-Up question and also graphically presents a variety of potential aviation-related careers to spur students' thinking about the topic. Most job titles are self-evident, but a few might require further explanation: e.g., an A&P mechanic works on airframes and powerplants (including the engines and associated equipment); a dispatcher controls the scheduling and activities of the airplanes and crew at an airport; a fixed-base operator (FBO) offers aircraft fuel, rental, maintenance, and/or instruction at an airport.

### Warm-Up

Ask students to write three questions they would want to ask an aviation professional about their job. Be sure students realize that they do not need to restrict themselves to the careers listed on the slide when considering aviation careers. Have them share their questions with a classmate, and then call on a few students to share a question with the group.

*Potential responses: What is your normal workday like? What do you do when you're not flying? Do you have to operate tools or equipment in your job? Do you work as part of a team? What do you have to wear to work? What kinds of hours do you work? What is rewarding to you about your job? What is challenging?*

Discuss students' questions. Then, explain that a work-based learning experience could help answer questions such as these by allowing students to see people actually performing on the job. Additionally, work-based learning can be valuable in helping students understand the skills needed for the job and give them practice developing those skills.

## EXPLORE

**Teacher Materials:** [Work-Based Learning Experiences Presentation](#), [Work-Based Learning Experiences Teacher Notes 1](#)

**Student Material:** [Work-Based Learning Experiences Student Activity 1](#)

**Slide 5:** Distribute the Work-Based Learning Experiences Student Activity 1 worksheet and have the students answer the questions as they watch the following video:

- "Aviation Work Experience" (Length 5:50)  
<https://video.link/w/vU7k>

Sample answers are provided in the **Work-Based Learning Experiences Teacher Notes 1** document.

## EXPLAIN

**Teacher Material:** [Work-Based Learning Experiences Presentation](#)

**Slides 6:** Begin with a class discussion of the following questions:



### Questions

What does work-based experience mean to you?

*Students responses will vary.*

Who benefits from work-based learning experience programs? Why?

*Both the student and the company or organization hosting the program benefit.*

- The **student** gains an inside look at a workplace in a field in which they are interested: e.g., how meetings are conducted, what a day in the life of an aviation professional looks like, etc.
- The **host** company has an opportunity to see its processes through new eyes; the experience also gives workers at the company the opportunity to mentor, and they may learn something new as well. Perhaps most importantly, the host company builds a connection to the next generation of aviation professionals, and perhaps finds a future employee.

**Slide 7:** Work-based learning is the opportunity to develop industry-specific technical and professional skills under the guidance of a mentor skilled in a particular field. It is an application of classroom learning in a relevant workplace.

There are three main types of work-based experiences: **job shadowing**, **internships**, and **apprenticeships**. Each provides similar opportunities for learning, while permitting a different level of exposure to a professional aviation career. The next few slides will explore these three types of experiences in greater detail.

Finally, emphasize the box at the bottom of the slide: Before participating in any work-based learning program, students should write down a list of questions about what they would like to know about the job, what skills are needed, what training or education is involved, and what they hope to gain as a result of the experience. If students enter these programs without concrete expectations and goals, they will not make the most of their opportunities.

**Slide 8:** Job shadowing is an opportunity for students to learn by “shadowing,” or following, a professional as they go about their job.

This kind of experience normally happens over a fairly short period of time (e.g., one day, a few days, or a few hours a week), and the student is primarily an observer. Before arriving on-site, students should ask their host about appropriate attire, including footwear, as well as any safety equipment they should bring to the site (e.g., goggles, earplugs); students should also confirm when and where to meet and whether they need to bring identification. Students may also want to bring a notebook in which to record observations.

When students arrive at the site, their host may brief them on what to expect from the experience; afterward, the host may debrief students to confirm learning and answer questions.

**Slide 9:** An internship is typically longer than a job-shadowing experience; it is also referred to as cooperative education (co-op), and it may even be paid. (The slide contains an image of a Boeing advertisement for a paid internship position as an example of what could be available.) Rather than simply observing a professional on the job, an intern may be allowed to perform certain hands-on tasks and activities relevant to the job; the professional should supervise the intern, both to ensure safety and to give feedback and answer questions.

Interns should be sure to arrive early on their first day to allow ample time to park, check in, and get settled; there may be forms to complete, and it may be necessary to take a picture for identification. Prior to arriving, interns should have contacted their on-site supervisor to confirm expectations for the internship, including times for arriving, eating lunch, and departing, as well as procedures for asking questions and communicating updates.

An internship should be treated like a “real job,” it is an opportunity to demonstrate one’s commitment to learning and improving one’s skills. Interns will likely be given deadlines, requiring time management skills; they may also receive multiple tasks, requiring organizational and prioritizing skills. Interns should be flexible and patient, willing to ask

questions, and eager to learn. It is generally a good idea to keep a record of the tasks and projects worked on; this information can later be transferred to a resume (if the rules of the internship allow).

**Slide 10:** Of the three main types of work-based experiences, an apprenticeship is usually the most involved and rigorous. Apprentices are paid employees. (An apprenticeship is an opportunity to “earn and learn.”) An apprenticeship may be up to two years long, and it may have age or other restrictions, as well as considerable on-the-job training to ensure the apprentice is able to perform tasks safely and effectively, with less supervision than an intern might receive.

Apprenticeships may lead to jobs directly from high school or college; the professional organization hosting the apprentice may even cover part of the apprentice’s college tuition. (To receive this benefit, the apprentice may be required to work for the professional organization for a set amount of time after graduating.) An apprenticeship typically involves classroom instruction in addition to workplace learning, and it can prepare students for postsecondary education as well as a full-time job. Completion of an apprenticeship often earns the apprentice an industry-recognized credential.

**Slide 11:** Conduct the **Formative Assessment**.

### Formative Assessment

Assign each student one of the three work-based learning experiences (job shadowing, internship, apprenticeship) to learn more about; students may also choose their preferred experience, but make sure the choices are equally distributed across the class. Students should search online for videos that share more information about their chosen experience with respect to aviation; students should find and watch at least two videos. Then, students should write a one-page summary of the benefits (e.g., training; professional skills and contacts; completed activities and tasks) that students of aviation can receive as a result of the chosen experience.

After students have written their summaries, facilitate a class discussion about what students learned and how a particular experience might meet their needs. The Socratic Method might lend itself particularly well to this activity. (In this method, the teacher asks a series of probing questions that students must answer to demonstrate they have critically thought about the topic. For example, the teacher might ask: *Are work-based learning experiences more effective than conducting research online?*)

[DOK-L3; *research*]

**Slide 12:** Regardless of the work-based learning environment—whether you are job-shadowing, interning, or apprenticing with an organization—strive to present yourself as a professional.



### Questions

What are some steps you could take to demonstrate professionalism during a work-based learning experience

*Possible responses: show up on time or early; dress appropriately for the job; have a positive attitude; treat everyone with respect; be willing to learn or try something new*

After students have shared their ideas, review these general tips for demonstrating professionalism:

- You are not expected to know everything—you are on-site to learn—so take the initiative to ask questions and obtain the information you need to do your best.
- Before your first day, confirm how you should dress on-site, including what footwear and other safety equipment you should bring. Remember: there is a significant difference between an office environment and an airplane cockpit or factory floor.
- Make sure you know when and where to arrive, and always plan to be early (especially on your first day) to allow ample time to park, check-in, and get settled.
- Plan to bring identification, as many companies in the aviation industry have security protocols. There may be forms for you to complete, and the company may need to take your picture for identification.
- Since this is a learning environment, plan to bring a notebook for recording observations of your experiences while “on the job.” In preparation, develop a list of questions about what you would like to know, what skills are needed, what training or education is involved, and what you hope to gain as a result of the experience.
- Learn the expectations for your work day: when you’re expected to arrive and depart; when to break for lunch and for how long; how your supervisor would like you to communicate updates; who can answer your questions; etc. There will be many unknowns, but in every case, the best way to respond is to be patient, flexible, and willing to learn new things.

## EXTEND

**Slide 13:** One of the most-effective strategies is simply to seek out a professional in a particular field, be honest about your interest, and ask that person if they will help you learn about the profession. Even if they cannot accommodate your desire for a work-based learning experience, they might be willing to give you a tour of the facility and answer your questions.

Other valuable sources of information and potential opportunities for work-based learning are websites for aviation companies and industry groups, as well as local military bases. (You may need to begin by inquiring with the public affairs office.) Finally, aviation associations may have internship or outreach programs.

If time permits, allow students to brainstorm other ideas for where they might learn about possible work-based learning opportunities.

## EVALUATE

**Teacher Materials:** [Work-Based Learning Experiences Presentation](#), [Work-Based Learning Experiences Teacher Notes 2](#)

**Student Material:** [Work-Based Learning Experiences Student Activity 2](#)

**Slide 14:** Conduct the **Summative Assessment**.

### Summative Assessment

In this summative assessment, students will complete a chart to highlight the pros and cons of each type of work-based learning experience, based on what they have learned in class. Provide each student with a copy of **Work-Based Learning Experiences Student Activity 2**. After completing the chart, students should write a few sentences explaining their personal interest in a particular experience.

Sample answers are provided in **Work-Based Learning Experiences Teacher Notes 2**.

[DOK-L3; *compare*]

### Summative Assessment Scoring Rubric

- Follows assignment instructions
- Responses show evidence of one or more of the following:
  - Provides thoughtful, accurate comparison of the three work-based learning experiences
  - Offers a conclusion regarding which experience is most appropriate for a particular set of circumstances
- Shows understanding of the concepts covered in the lesson
- Shows in-depth thinking including synthesis of lesson objectives

#### Points      Performance Levels

9-10      Student fills in all tables thoroughly and shows a deep understanding of the differences and commonalities of job shadowing, internships, and apprenticeships, and the pros and cons of each. Produces a well-written plan that includes all pertinent information from the tables as well as a realistic timeline of steps that must be taken.

7-8      Student fills in all tables and shows a sufficient understanding of the differences and commonalities of job shadowing, internships, and apprenticeships, and the pros and cons of each. Produces a plan that includes most information from the tables as well as a timeline of steps that must be taken.

5-6      Student fills in most boxes and demonstrates a partial understanding of the differences and commonalities of job shadowing, internships, and apprenticeships. Produces a plan that includes some information from the tables but timeline may be incomplete or unrealistic.

0-4      Student fills in some boxes but demonstrates little or no understanding of the differences and commonalities of job shadowing, internships, and apprenticeships, and the pros and cons of each. Produces a plan that is incomplete and fails to provide a timeline of steps that must be taken.

## STANDARDS ALIGNMENT

### COMMON CORE STATE STANDARDS

- **RST.9-10.2** - Determine the central ideas or conclusions of a text; trace the text's explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.
- **WHST.9-10.2** - Write informative/explanatory texts, including the narration of historical events, scientific procedures/ experiments, or technical processes.
- **WHST.9-10.4** - Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
- **WHST.9-10.6** - Use technology, including the Internet, to produce, publish, and update individual or shared writing products, taking advantage of technology's capacity to link to other information and to display information flexibly and dynamically.

- **WHST.9-10.8** - Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.
- **WHST.9-10.9** - Draw evidence from informational texts to support analysis, reflection, and research.

## REFERENCES

“Aviation Work Experience” <https://video.link/w/vU7k>