

## PATHOLOGY

### DESCRIPTION OF SESSION

This session provides participants with an understanding of pathology and how it fits into the overall health care profession.

### CATEGORY

- Health
- Clinical Pathology

### OBJECTIVES

By the end of this session, participants will be able to:

- Describe the role of a clinical pathologist.
- Discuss the educational requirements of a clinical pathologist.
- Discover opportunities within the field of pathology.
- Identify the differences between bacterial and viral infections.
- Understand blood typing.
- Tour a pathology laboratory.

### SUPPLIES

- Laptop computer or equipment to view videos

### PREPARATION

- If using the blood typing game for Activity 3, be sure to review tutorial 2 that is included on the game site (click on Main Menu at the top right corner and then click on the Read link next to “How do you determine a patient’s blood type?”).
- Arrange for a speaker who is either a pathologist or a medical technologist.
- Arrange for a tour of a pathology laboratory.

### VIDEOS

*Reminder: Any time you use an outside source, be sure you preview the content and follow the content owner's or website's permission requirements and guidelines.*

The following are suggested video resources that Advisors may find helpful in planning this session:

- [“Size Analogies of Bacteria and Viruses”](#) from the Howard Hughes Medical Institute
- [“Why Do Blood Types Matter?”](#) from TED-Ed, (lesson by Natalie S. Hodge, animation by Brad Purnell)
- [“The Blood Typing Game”](#) from Nobel Media. Review tutorial 2 on the game site prior to playing. (Click on Proceed, choose either of the quick game types, click Main Menu at the top right corner, and then click on the Read link next to “How do you determine a patient’s blood type?”)

### RESOURCES

**Reminder:** Any time you use an outside source, be sure you follow the content owner's or website's permission requirements and guidelines.

The following are suggested resources that Advisors may find helpful in planning this session:

- [“What Does a Pathologist Do?”](#) from Sokanu
- [“Careers in Pathology and Medical Laboratory Science”](#) from the American Society for Clinical Pathology
- [“Bacterial vs. Viral Infections: How Do They Differ?”](#) from the Mayo Clinic
- [“Blood Types”](#) from the [American Red Cross](#)

**ADVISOR NOTE:** Text in italics should be read aloud to participants. As you engage your post in activities each week, please include comments, discussions, and feedback to the group relating to **Character**, **Leadership**, and **Ethics**. These are important attributes that make a difference in the success of youth in the workplace and in life.

## ACTIVITIES

### Introduction

Tell participants: *Pathology studies the causes and effects of diseases. It is the branch of medicine that deals with the laboratory examination of samples of body tissue for diagnostic or forensic purposes. A medical doctor who specializes in interpreting and diagnosing the changes in tissues and body fluids is called a pathologist.*

### ACTIVITY 1

#### Speaker

Have a pathologist or medical technologist address these topics:

- Overview of pathology
- The role of the pathologist in the health care system
- A typical day for a pathologist
- Additional careers in pathology including specialized pathologist, medical technologist, and pathology assistant
- Educational requirements involved in becoming a pathologist and recommendations for high school and college preparation
- The future of pathology

### ACTIVITY 2

#### Bacteria and Viruses

- Explain briefly the differences between bacteria and viruses. Address any participant questions.
- You may find [“Size Analogies of Bacteria and Viruses”](#) from the Howard Hughes Medical Institute to be a helpful resource.
- Ask participants: *Why this is important?* Discuss.

### ACTIVITY 3

#### Blood Typing

- Ask participants whether anyone knows their blood type. Then discuss these questions:

- *Do you know what the different blood types mean?*
- *Do you know the most common blood types?*
- *Do you know the rarest blood type?*
- *Do you know which blood type is considered the universal donor? Why is that?*
- Discuss the process of blood typing and the ABO blood typing system.
- Consider sharing [“Why Do Blood Types Matter?”](#) from TED-Ed. Address any participant questions.
- You may find [“The Blood Typing Game”](#) from Nobel Media to be a helpful resource.

#### **ACTIVITY 4**

##### **Tour**

- Tour a pathology laboratory.

##### **ADVISOR NOTE**

Some sample questions are below. They are designed to help the participants apply what they have learned to their own interests. You are welcome to use these questions or develop your own questions that relate to your post or specific focus area.

##### **REFLECTION**

###### Focusing Questions

- *What did you observe in the pathology laboratory?*
- *Which pathology career do you find most interesting?*
- *What new information did you learn about bacteria and viruses?*
- *Why is blood typing so important?*
- *What did you learn during today’s discussion?*

###### Analysis Questions

- *Discuss feedback from the videos or hands-on practice.*
- *What types of ethical issues do you think could arise related to pathology?*

###### Generalization Questions

- *What can you do now, during your time as a student, to prepare yourself for this or a similar career in the medical field?*
- *Why is this topic important?*

Links to other websites are provided for your convenience and information only. When you click on a link to another website, you will be leaving this website. The fact that we provide links to other websites does not mean that we endorse, authorize, or sponsor the linked website, or that we are affiliated with that website’s owners or sponsors. Unless otherwise indicated, the linked sites are not under our control and we are not responsible for and assume no liability for the content or presentation of any linked site or any link contained in a linked site, or any changes or updates to such sites. Your use of a linked site and its content is at your sole risk and may be subject to restrictions and/or limitations. Always take care to abide by the linked site’s terms of use, including any permission requirements/guidelines.