



# Assessing vital signs



## Standards

### NCHSE

- 1.1.2 Identify basic structures and describe functions of human body systems.
- 2.2 Medical terminology.
- 2.3 Written communication skills.
- 4.2.1 Apply employability skills in healthcare.
- 7.1.2 Infection control, differentiate methods of controlling the spread and growth of pathogens.
- 10.1 Technical skills, demonstrate procedures for measuring and recording vital signs.

## Materials

- Stethoscope ([SA01176](#))
- Sphygmomanometer ([SB34978](#))
- Alcohol prep pads ([SB09360](#))
- Handwashing station

## Objectives

*Students will...*

- Learn how healthcare professionals assess vital signs and use that information to understand patient conditions and inform patient treatment
- Research a vital sign topic, learn how to check a patient's vital signs
- Prepare a presentation, and deliver the presentation along with a demonstration on a manikin or fellow student

# Directions

1. Start by activating your students' knowledge of infection control concepts. Ask the following questions:
  - Can you describe the chain of infection?
  - Can you explain the correct steps for handwashing?
  - Can you explain why handwashing and sanitizing between patients is critical?

Then have students perform correct handwashing techniques.

2. Next, provide stethoscopes and alcohol prep pads for students to clean them. Without further instruction, prompt students to use the stethoscopes to listen to their own heartbeats.

Allow students to use trial and error and collaboration to determine the best method for auscultating their hearts. Then, ask students what they found worked best.

3. After students have had a chance to experiment with the stethoscopes, demonstrate the correct way to use them. Then, activate prior knowledge and encourage students to think critically about real-life applications with the following questions:

- What terms describe the heart?
- What terms describe pulse?
- What factors could affect a person's heart rhythm?
- What signs or symptoms could be caused by cardiovascular dysfunction?
- Pulse is one vital sign. What are others?
- What types of function or dysfunction can these vitals represent?

4. Next, introduce the "Vital signs presentation group project" to students by placing students in groups and providing the handout and rubric on pp. 3–4 to each group. Allow groups to select their topics or assign a topic to each.

5. Explain to students that they will organize their research into a presentation outline and draft. The final product will be a PowerPoint presentation they will share with their classmates as a study tool. They will also demonstrate how to assess their chosen vital sign during the presentations.

Explain that they will use course materials and reputable online sources to develop their presentations and answer the driving question: How do healthcare professionals assess vital signs and use that information to understand patient conditions and inform patient treatment?

Before they begin, ask students to think about what makes a good presentation. How can they effectively communicate what they learned? Remind students that they must include a final slide in their presentation with a list of APA-formatted citations for their sources.

6. Next, explain that students will begin working on their presentations while they rotate through hands-on practice. Then, pull small groups out for training on measuring vital signs and let them practice with a partner while the rest of the groups work independently.

After students have practiced all vital signs, have them manually perform blood pressure measures with a partner.

**Teacher tip:** Provide students with a visible timer and short-term goals to help them manage their independent group work while you are doing hands-on activities with groups. For example, "Our first timer is set for 15 minutes. Your goal is to introduce yourselves, read the assignment, and define roles and responsibilities for each group member in that time."

7. While students are working independently, demonstrate the following assessment skills to small groups and then allow each group member to demonstrate with a partner or on a manikin.

- Blood pressure
- Pulse
- Oxygen saturation
- Respirations
- Pain
- Temperature

8. After all students have had a chance to learn vital sign skills, have each student practice their portion of the presentation or skill demo in front of their group before presenting to the class. Group members should offer feedback on voice, speed, effectiveness, and accuracy.

Students should also review the following as a group: Is their information accurate? Is the presentation detailed enough for people to understand? Can all group members perform the skill demo correctly?

9. Before groups present, instruct students to gather materials and supplies for notetaking and explain expectations for audience behavior. Then, have student groups present their content and perform a demonstration using the correct medical equipment and a volunteer from their group. All group members should contribute to the presentation, and audience members should take notes and ask clarifying questions.

**Teacher tip:** Between presentations, perform another demonstration of the skill with a volunteer, repeating and clarifying the steps explained by the presenters to reiterate the correct procedure and emphasize technique and medical terminology.

10. Upon completion of all class presentations, display the driving question: How do healthcare professionals assess vital signs and use that information to understand patient conditions and inform patient treatment?

Prompt students to use their notes from presentations and what they've learned to answer the driving question in their own words.

11. Then, provide students with feedback on their presentation using the rubric on p. 4, as well as feedback on their submitted response to the driving question.



# Student handout — Vital signs presentation group project

**Directions:** Select one of the topics below.

1. Blood pressure
2. Oxygen saturation
3. Pain
4. Pulse
5. Respirations
6. Temperature

## Required presentation content

Each member of your group must deliver some portion of the following content. See the rubric for more detail.

### Anatomy and physiology

- What is being measured?
- How is it measured?
- What organs or organ systems are involved in this measurement?
- What is a normal measurement?
- What can affect this vital sign?

### Patient evaluation

- What anatomical landmarks are used when assessing this vital sign?
- How should the patient be positioned to collect this measurement?
- What medical equipment is used to measure this vital sign?
- How can you explain this vital sign to the patient?
- What steps are necessary to correctly collect this vital sign measure? (This must be demonstrated.)

### Pathology

- What terms describe abnormal values (too low/too high)?
- What values would be considered abnormal?
- What should you do if your reading is abnormal?

## Product and delivery

Review your rubric against your draft and final versions of your presentation to ensure it is of the highest quality.

- Title slide
- Citation slide (APA format)
- Correct spelling
- Correct punctuation
- Correct use of terminology
- Ideas clearly stated in bullet points or illustrative formats
- Images are clear and used to enhance audience's understanding

# Rubric — Vital signs presentation group project

	<b>Below standard 1 point</b>	<b>Approaching standard 2 points</b>	<b>At standard 3 points</b>
<b>Organization</b>	<ul style="list-style-type: none"> <li>Project is untitled or misleading</li> <li>Project is not broken into identifiable parts</li> <li>No obvious order of ideas</li> <li>Does not use consistent design elements</li> </ul>	<ul style="list-style-type: none"> <li>Project title states main idea of project</li> <li>Parts of project do not fit logically with the rest</li> <li>Order distracts from audience's understanding</li> <li>Attempts consistent design</li> </ul>	<ul style="list-style-type: none"> <li>Project title is engaging and clearly prepares audience for perspective of answers</li> <li>All portions easily identified</li> <li>Clear order that guides audience through ideas</li> <li>Consistent use of fonts, headings, colors, themes</li> </ul>
<b>Analysis and accuracy</b>	<ul style="list-style-type: none"> <li>Communicates info from reputable sources and summarizes project-specific data in answers to the driving question</li> <li>Uses simplistic language to explain answers</li> </ul>	<ul style="list-style-type: none"> <li>Shares connections between reputable source info and project-specific data in answers to the driving question</li> <li>Uses a combination of simplistic and descriptive language to explain answers</li> </ul>	<ul style="list-style-type: none"> <li>Analyzes reputable sources and applies project-specific data to form possible answers to the driving question</li> <li>Uses precise and descriptive medical terminology to enhance answers</li> </ul>
<b>Product and delivery</b>	<ul style="list-style-type: none"> <li>Visual aids or elements included are distracting (text heavy, poor quality images, order hard to follow)</li> <li>Does not present answer(s) to the driving question</li> <li>No evidence or irrelevant evidence used to justify answers</li> </ul>	<ul style="list-style-type: none"> <li>Uses appropriate media</li> <li>Attempts to include elements that are engaging or fun</li> <li>Portions of aid or elements are distracting</li> <li>Attempts to answer the driving question but incorporates invalid or irrelevant information</li> <li>Attempts to use evidence for answers to the driving question</li> </ul>	<ul style="list-style-type: none"> <li>Media is well produced</li> <li>Includes elements that are fun, exciting, engaging, or powerful</li> <li>Enhances audience understanding</li> <li>Presents possible answers to the driving question that are valid and relevant</li> <li>Justifies answers to driving question using evidence</li> </ul>
<b>Presentation skills</b>	<ul style="list-style-type: none"> <li>Does not look at audience</li> <li>Reads notes or slides</li> <li>Does not project confidence</li> <li>Unprofessional clothing</li> </ul>	<ul style="list-style-type: none"> <li>Infrequent eye contact</li> <li>Reads most of the time</li> <li>Shows some confidence</li> <li>Attempted appropriate clothing</li> </ul>	<ul style="list-style-type: none"> <li>Maintains eye contact</li> <li>Only glances at notes and slides</li> <li>Natural posture, obvious confidence</li> <li>Professionally dressed</li> </ul>
<b>Speaking skills</b>	<ul style="list-style-type: none"> <li>Mumbles or speaks too quickly or slowly</li> <li>Frequently uses filler words (um, so, like, and, etc.)</li> <li>Does not adapt speech to context</li> </ul>	<ul style="list-style-type: none"> <li>Speaks clearly most of the time</li> <li>Loud enough for audience to hear but monotone</li> <li>Some filler words used</li> <li>Inconsistent use of appropriate speech or tone</li> </ul>	<ul style="list-style-type: none"> <li>Speaks clearly, loudly, at an appropriate pace for audience to follow</li> <li>Rarely uses filler words</li> <li>Tone and speech appropriate for context</li> </ul>

Comments:

Score: \_\_\_\_\_ / 15