

LESSON 5

Wheelchair Rugby Chairs

Timing: 2 x 45
minute blocks

CROSS-CURRICULAR: Sciences

LEARNING OUTCOMES: Sample Grade 5, see p 76

OVERVIEW: This lesson develops an understanding of the design and purpose of the two types of wheelchair rugby wheelchairs and how they differ from the day wheelchair.

CURRICULUM SKILLS / KNOWLEDGE / VALUES:

Students will:

- learn about the structural differences amongst various wheelchairs
- learn about and understand the role of the offensive and defensive rugby wheelchairs

TEACHING MATERIALS:

- Day Wheelchair Worksheet (make an overhead transparency) and Answer Key
- Wheelchair Comparison Worksheet (photocopy 1 per student and make an overhead transparency)
- Wheelchair Parts Description Chart – Day Wheelchair and Rugby Wheelchair (see Teacher Backgrounder)
- Wheelchair Venn Diagram/Answer Key

Teaching Activities

- 1** With the class, review the Day Wheelchair Worksheet on an overhead transparency. Review the components of this wheelchair as listed, provide information about the components and together complete the worksheet on the overhead.
- 2** With the class, review the photographs of the wheelchairs on an overhead transparency. Review the components of all three wheelchairs. Discuss each part of the wheelchair and describe the function of each component.
- 3** Individually or in pairs, complete a Wheelchair Venn Diagram (comparison chart) which compares the wheelchair rugby chair with the day chair. The parts of the chairs that are similar should go in the section where the two circles overlap; parts that are different go in either the rugby circle or the day circle.





- 4 Research the evolution of the wheelchair over the past 30 years. Present findings in a brief written or verbal report or through a series of illustrations of the wheelchair.
- 5 Describe how the change in sport wheelchairs over the years has impacted athletes and their sports.
- 6 Research and illustrate a specific sport wheelchair: basketball, racing, throwing, tennis.
- 7 Wheelchairs have changed over the years. Design, illustrate and label a futuristic wheelchair. Explain why it will be more efficient and effective than the traditional current wheelchairs.

TEACHER BACKGROUND

The width of the wheelchair is determined by the size of the player, but no part of the wheelchair may extend beyond the push rim.

The wheelchair should not exceed 116cm in length from the back of the wheel to the front-most part of the wheelchair.

Offensive Chairs: Higher point players typically use offensive wheelchairs. Most offensive wheelchairs have a small bumper on the front to protect the feet.

The guard is metal, and extends the length of the footplate. This guard is rounded to ensure there is nothing a defensive player could hook. In addition, most offensive wheelchairs have a metal plate called a wing that extends from the bumper to the front of the main wheel so there is not a place for a defensive wheelchair to pick. The offensive wheelchair usually also has a spoke guard connected to the push rim so a defensive player cannot hook into the wheel.

Defensive Chairs: Lower point players typically use defensive wheelchairs. These wheelchairs have a large bumper on the front of the footplate to pick other players' chairs. Unlike offensive chairs, defensive chairs do not have wings.

Not all rugby wheelchairs are exactly the same, and most can be adjusted to suit each individual's comfort and safety needs.



Day



Offensive

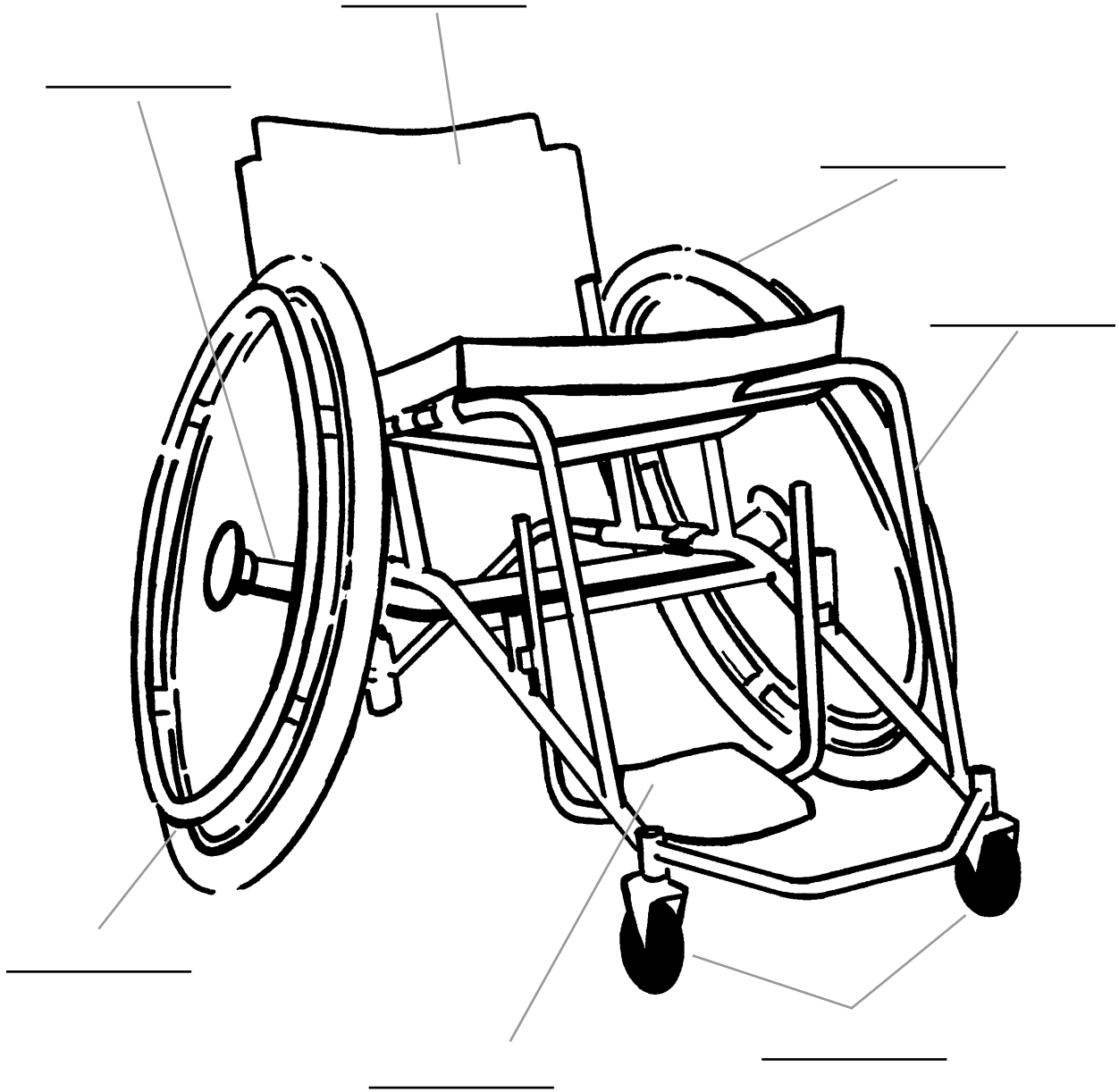


Defensive

Wheelchair Parts

WHEELCHAIR COMPONENTS	RUGBY WHEELCHAIR	DAY WHEELCHAIR	DESCRIPTION
anti-tip wheels	Yes	No	<ul style="list-style-type: none"> – prevent the athlete from falling backwards – a safety device that is MANDATORY in rugby
axle	Yes	Yes	<ul style="list-style-type: none"> – slides into the hub of the wheel
camber bar	Yes	No	<ul style="list-style-type: none"> – stabilizes the chair and prevents a player from tipping over if hit from the side – allows a player to turn the chair faster – prevents the pinching of hands between the wheels – 15 to 20 degrees for rugby
defensive bumpers or offensive wings	Yes	No	<ul style="list-style-type: none"> – allow defensive players to slow down offensive players by hooking on the opposition chair frame – allow offensive players to easily deflect the defensive picking action
folding backrest	No	Yes	<ul style="list-style-type: none"> – located on the back of the chair and has alternate heights depending on the level of spinal cord injury – with a folding backrest the wheelchair can be completely collapsed for easier storage and transportation
footrest	Yes	Yes	<ul style="list-style-type: none"> – the place where the feet rest
frame	Yes	Yes	<ul style="list-style-type: none"> – the structure of the chair
front caster wheels	Yes	Yes	<ul style="list-style-type: none"> – the two small wheels at the front of the wheelchair
large rear wheels	Yes	Yes	<ul style="list-style-type: none"> – provides mobility
spoke guards	Yes	No	<ul style="list-style-type: none"> – protect the spokes on the rear wheels as well as players' hands
push rim	Yes	Yes	<ul style="list-style-type: none"> – the part of the wheel used to propel the wheelchair – located close to the wheel to prevent 'picking' from other players

Day Wheelchair Worksheet

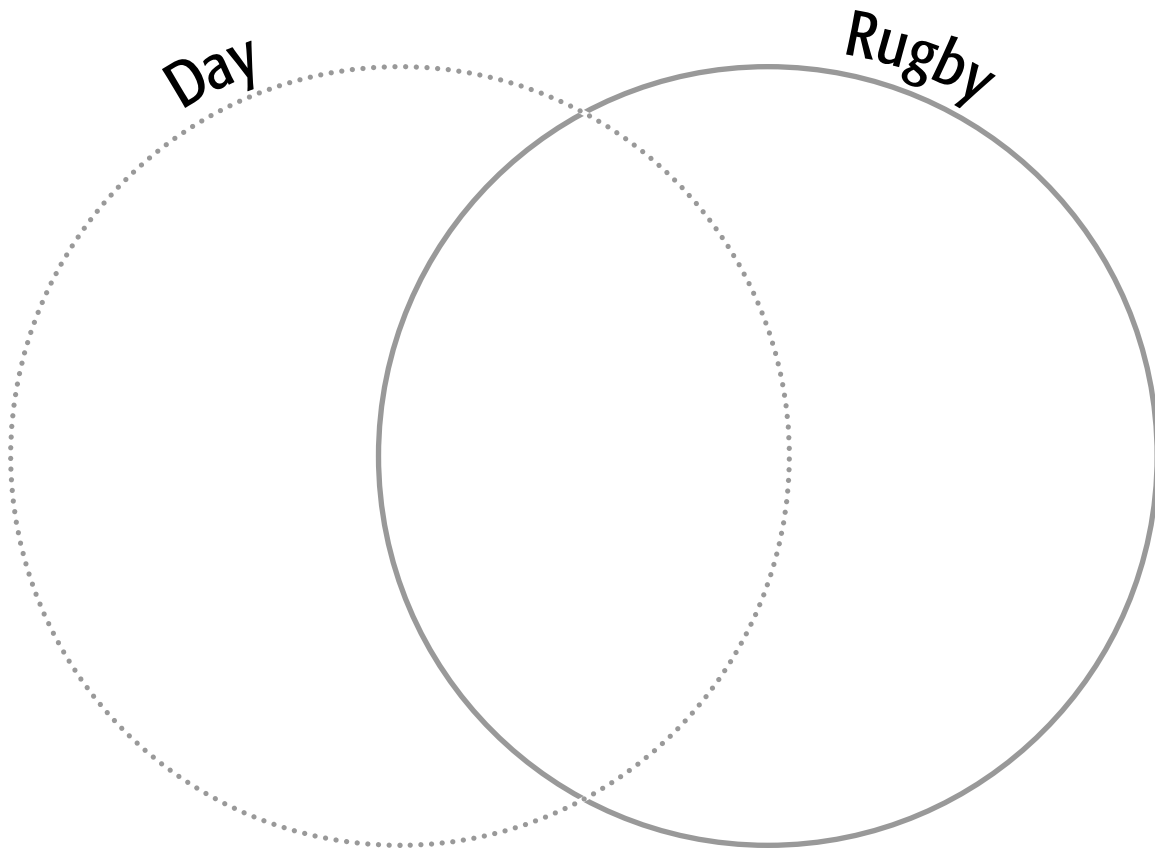


- axle
- frame
- large rear wheels
- footrest
- folding backrest
- front caster wheels
- push rim

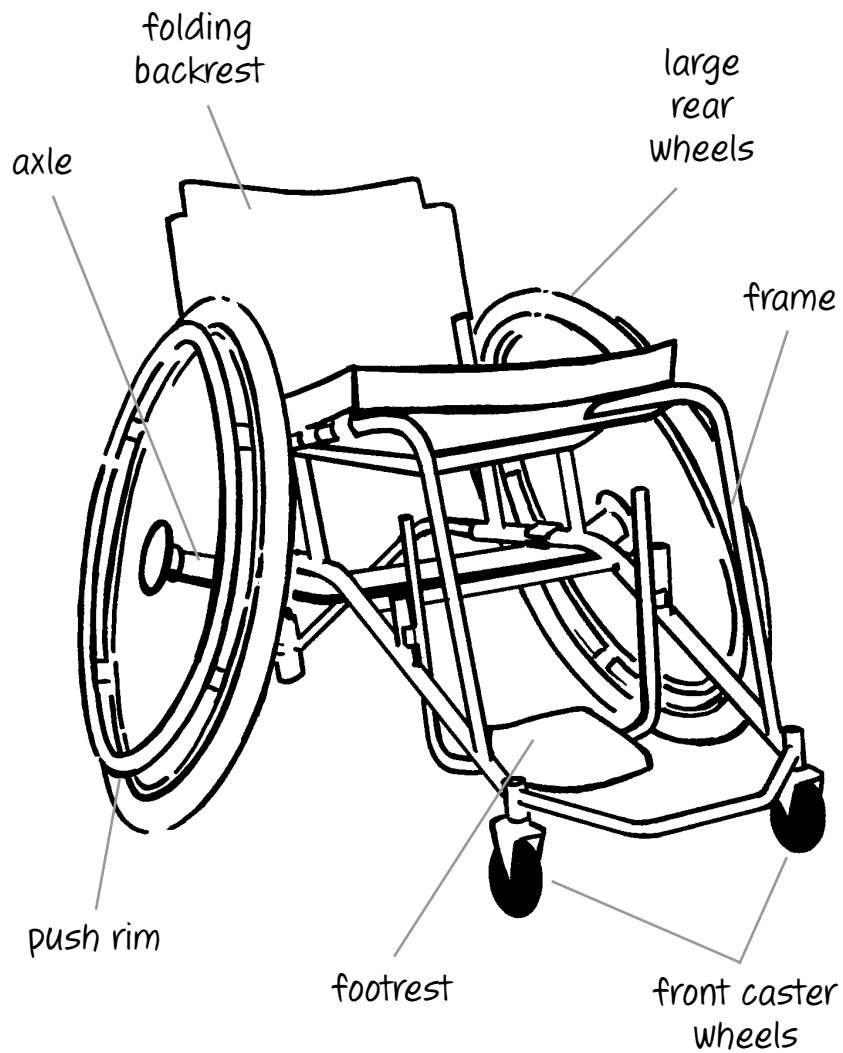
Wheelchair Comparison Worksheet



Wheelchair Venn Diagram



Day Wheelchair Worksheet



Wheelchair Venn Diagram

