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# Roundabouts vs Traffic Lights

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Segment Length: 4:05 minutes

## **Lesson Description:**

What is a roundabout? How does a roundabout differ from a traffic light? Is one better than the other? This segment looks at the efficiency and effectiveness of roundabouts.

## **Concepts & Key Terms:**

*Roundabout* – a circular intersection or junction in which road traffic flows counterclockwise around a central island. Cars entering roundabouts yield to traffic already in the junction. Roundabouts eliminate the need for traffic lights and stop signs.

*Unilaterally* – an action taken by only one person, group, or country involved in a situation, without the agreement of others.

*T-Bone* – when the front of one vehicle strikes the side of another, forming the shape of a “T” at the point of impact.

## **Objectives:**

Students will be able to:

- list reasons some people say roundabouts are better than traffic lights.
- explain the differences between roundabouts and traffic lights.
- assess the impact roundabouts have on public safety.
- hypothesize about how intersections with traffic light can be converted to roundabouts.

## **Preview Activity and Questions:**

Distribute the Venn Diagram and have students work individually for 5-10 minutes to add what information they can to the best of their ability. (After showing the video, allow students to revise what they wrote.)

**OR**

Distribute the K-W-L chart and have students complete the first two columns to the best of their ability. (Have them revise their answers and fill in the last column after viewing the video.)

**OR**

Distribute the Picture Activity worksheet for students to complete.

## **Viewing Guide:**

We recommend that teachers show the video twice: once to allow students to view it and focus on the issues presented, and once to allow them time to complete the viewing guide. After they complete the viewing guide, allow students a few minutes to work in pairs sharing and verifying answers.

## **Answers to Viewing Guide**

1. save lives
2. intersection
3. fuel
4. confusing
5. safer

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## Viewing Guide

Name \_\_\_\_\_

Date \_\_\_\_\_

Class \_\_\_\_\_

Teacher \_\_\_\_\_

**Directions:** As you watch the video, fill in the blanks with the correct words.

1. We've converted almost all of our traffic lights to roundabouts because we \_\_\_\_\_.
2. The roundabout is a more efficient way to move cars through an \_\_\_\_\_.
3. You never come to a complete stop at the roundabout. Tremendous amounts of \_\_\_\_\_ are saved.
4. And yet Americans say, "Oh, I don't want these things. They're \_\_\_\_\_." I'm more likely to have an accident."
5. Modern roundabouts are small. The smaller they are, the \_\_\_\_\_ they become.

**Now, take a few moments to reflect on the video and answer the questions below:**

Prior to watching this video, had you ever thought about the safety or effectiveness of roundabouts? \_\_\_\_\_. If so, what did you think of them? \_\_\_\_\_

\_\_\_\_\_

What are some of the benefits of roundabouts that were discussed in the video? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

What are some of the disadvantages of traffic lights? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

According to John Stossel and Mayor Brainard, roundabouts save lives. How so? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

### **Discussion and Analysis:**

1. Why might Homer Simpson get confused by a roundabout in Europe? Why might Americans be wary of roundabouts?
2. *MythBusters* found that roundabouts are a more efficient way to move cars through an intersection. What do they mean by “efficient”?
3. Why might it be quicker to get through a roundabout? What are some of the advantages of that?
4. When referring to an accident, what’s a T-bone?
5. Why are there fewer traffic fatalities from accidents at roundabouts than at traffic lights?
6. How might the speed of cars affect the accident and injury rates? Who slows down when approaching a traffic light? Who slows down when approaching a roundabout?
7. John Stossel said that one study showed switching from traffic lights to roundabouts leads to a decrease in deaths and injuries but a small increase in collisions. Is the benefit worth the cost?
8. Do you think there are areas of the country where roundabouts might work better than in other areas? What areas? Why?
9. Do intersections with traffic signals take up more, less, or the same space than roundabouts would? Why?
10. Thinking about some of the intersections with traffic lights in our community, would it be easy to change to roundabouts? What factors might need to be considered?
11. Some communities have installed red light cameras. Cars going through red lights are automatically ticketed. Should the revenue from tickets be considered when a community is thinking about changing from traffic lights to roundabouts? Why/Why not?
12. Why are roundabouts better for the environment?
13. In the video, a realtor says that roundabouts in towns increase the value of people’s homes. Why might that be?
14. What about pedestrians: which do you think is safer for pedestrians: intersections with traffic lights or roundabouts? Why?

### **Discuss These Lines from the Video:**

1. Although Britain has lots of them, their overall rate of traffic fatalities is well less than half the U.S. rate.
2. We’ve converted almost all of our traffic lights to roundabout because we save lives.
3. Instead of a T-bone, you get a sideswipe.

4. Slowing people down makes it seem like it will take longer for cars to get through intersections.
5. The statistics are that a roundabout moves 50% more traffic than a traffic light.
6. How many times have we been frustrated sitting at an intersection where you're the only car there and you've got the red light and you're just sitting there twiddling your thumbs, waiting for that light to change.
7. When there are storms, some stoplights stop working.
8. They are better for the environment. You never come to a complete stop at the roundabout. Tremendous amounts of fuel are saved.
9. To sum up, it's safer, costs less, and is better for your community
10. And yet Americans say, "Oh I don't want these things. They're confusing. I'm more likely to have an accident."
11. America is catching up on roundabouts. When I started, we probably had under a couple of hundred in the United States today we're pushing five or 6,000.
12. Most American politicians don't want to take a risk that might get them un-elected.

### **Quotes for Discussion:**

Roundabouts reduced injury crashes by 75 percent at intersections where stop signs or signals were previously used for traffic control, according to a study by the Insurance Institute for Highway Safety (IIHS).  
– Washington State Department of Transportation

Roundabouts generally are safer for pedestrians. Pedestrians walk on sidewalks around the perimeter and cross only one direction of traffic at a time. Crossing distances are relatively short, and traffic speeds are lower than at traditional intersections.  
– Insurance Institute for Highway Safety

A typical American response to roundabouts is that the roundabout is a European phenomenon that cannot and should not be implemented in the United States, because the roundabouts are too difficult to navigate.  
– Victoria Fromme

Arguably, roundabouts should be the first option considered for intersection control. But each case and intersection needs to be examined on its own merits. And don't think blindly installing roundabouts everywhere is the easy answer to solve all our congestion issues.  
– Bryan Ficek

Vehicles, bicyclists, and pedestrians can all benefit from roundabouts.  
– BishopLegal.com

If you haven't practiced a given roundabout before entering it, you'd better hope you read the signs explaining how to use it 150 feet back, because you can't possibly figure it out on the fly.  
– Kalen McCain

In addition to making better time, the reduced idling is good for the environment. [Iowa] City officials estimated that drivers in the city save 24,000 gallons of gas per year per roundabout.  
– Elijah Helton

Drivers need to slow down and think at roundabouts as opposed to trying to beat a red light.

– acsengineers.com

### **Activities:**

1. Have students complete the K-W-L chart [fillable PDF] in class or for homework.
2. Have students complete the Venn Diagram [fillable PDF] after viewing the video.
3. Have students complete the picture activity [fillable PDF] prior to or after viewing the video.
4. Watch the *MythBusters* video, “Four-way stop vs. Roundabout,” which was mentioned in the Stossel video. Write a comparative essay on the Stossel and *MythBusters* videos. Be sure to address the strengths and weaknesses of each video, ways in which they support each other, and ways in which they are different or contradict each other,  
<https://www.wimp.com/mythbusters-four-way-stop-vs-roundabout/>
5. Watch the video clip from *National Lampoon’s European Vacation*. Explain why, in the Stossel video, Jim Brainard says: “Chevy Chase didn’t do us any favors.” What does he mean by that? How might the lack of familiarity with roundabouts influence public perception?  
<https://www.youtube.com/watch?v=iAgX6qlJEMc>
6. Write an essay that supports one of the three viewpoints below:
  - A) Traffic lights are better than roundabouts as an effective and efficient means to handle traffic through intersections. Be sure to address these questions in your essay: Why are traffic lights the better option? What are the advantages of traffic lights? What are disadvantages of roundabouts?
  - B) Roundabouts are better than traffic lights as an effective and efficient means to handle traffic through intersections. Be sure to address these questions in your essay: Why are roundabouts the better option? How may the conversion to roundabouts be executed? What are the advantages of roundabouts? What are the disadvantages of traffic lights?
  - C) Roundabouts *and* traffic lights are effective and efficient means to handle traffic through intersections. This is not an either/or situation. It depends on the intersection. Be sure to address these questions in your essay: Where are traffic lights better? Where are roundabouts the better option?
7. Read the opposing articles in “Point/Counterpoint: What about roundabouts?” and write a summary of each article. Then, write a brief analysis of the arguments made by each writer. As a conclusion, inform your reader which article is more convincing and why you determined that.  
<https://dailyowan.com/2020/03/03/point-counterpoint-what-about-roundabouts/>
8. Research the number of people killed at intersections in the U.S. each year and the reasons for the fatalities. Share your findings in a slideshow or oral presentation, or on a poster board.

9. Read the article “All About Roundabouts” by Paul Stenquist and create a slideshow that summarizes the major ideas in the article. Be sure to include the different forms of roundabouts, the countries they are in, and the affect they have had.  
<https://www.nytimes.com/2020/08/20/business/roundabouts-traffic-circles.html>
10. Read the article “MDOT Planning Roundabout At M-37/Vance Road In 2021” by Beth Milligan. What are the reasons given for converting to roundabouts? What was the Blair Township Supervisor’s initial reaction? What reasons did she give for changing her mind?  
<https://www.traverseticker.com/news/mdot-planning-roundabout-at-m-37-vance-road/>
11. Write and produce a 30-second public service announcement (PSA) in which you try to persuade local citizens and politicians to support or oppose converting a local intersection with a traffic light to a roundabout. Be sure to advocate strongly for the side you take, using evidence to support your position. The PSA may be presented as a video (TV spot), audio (radio spot), slideshow, or on a storyboard. The PSA may be a group or individual project.
12. Produce a “man-on-the-street” video in which you ask people if they would support converting four-way intersections with traffic lights to roundabouts in your community. Be sure to ask them the reason for their answer. In lieu of person-to-person interviews, students can conduct online video interviews.
13. Research and create a slideshow with statistical data on accidents and fatalities at intersections. Be sure to include data on causes of accidents. How might this relate to roundabouts?
14. Design a roundabout to replace a traffic light in your community. (Be sure to research differences in space each takes up.)
15. Is there a roundabout in your community or in a neighboring community? Spend some time at a safe distance observing what goes on. Write down your observations and present them to the class. You might want to enhance your presentation with some video from the roundabout.
16. Read and summarize “The problems with modern roundabouts” by Robert Steuteville. Then decide whether some of the roundabouts created in Okemos, Michigan should be redesigned or are poorly thought-out. Do you think converting to roundabouts was a bad idea? If you were mayor, how might you proceed?  
<https://www.cnu.org/publicsquare/problems-modern-roundabouts>
17. Watch “Why The U.S. Hates Roundabouts” and write an essay on why America lags behind many other countries in the number of roundabouts.  
<https://www.youtube.com/watch?v=AqcyRxZJCXc>
18. People often forget the consequences of options. Red light cameras have an impact at intersections, but what is their impact? Are red-light cameras a better option than roundabouts? Read and take Cornell Notes—or prepare a slideshow--on one of the following:
  - A) “Red Light Cameras May Not Make Streets Safer” by Justin Gallagher  
<https://www.scientificamerican.com/article/red-light-cameras-may-not-make-streets-safer/>
  - B) Red light running

<https://www.iihs.org/topics/red-light-running>

- C) Unintended Consequences: Red-light Cameras Might Cause Traffic Accidents  
<https://www.hg.org/legal-articles/unintended-consequences-red-light-cameras-might-cause-traffic-accidents-19125>

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# Roundabouts Vs. Traffic Lights

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## Picture Activity

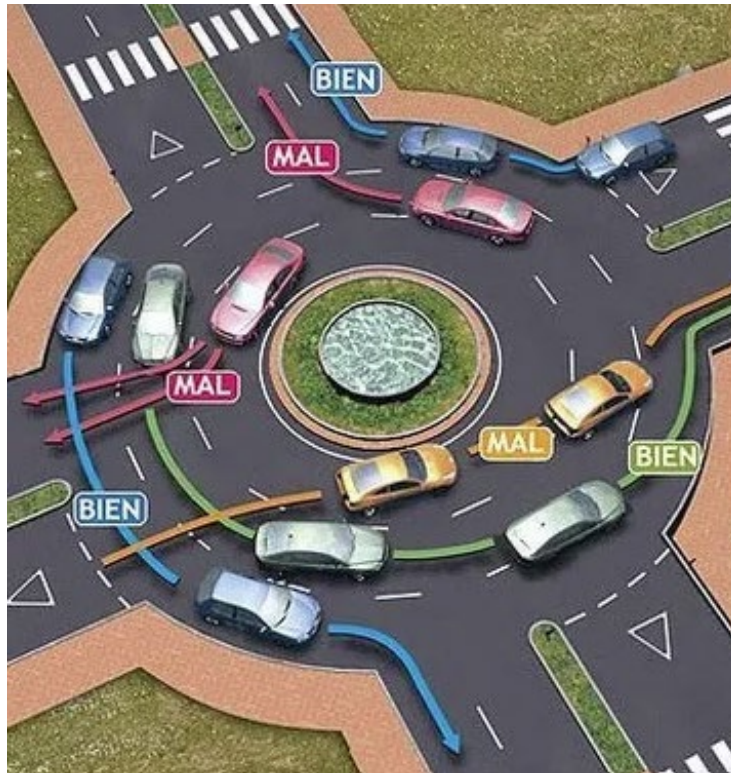
Name \_\_\_\_\_

Date \_\_\_\_\_

Class \_\_\_\_\_

Teacher \_\_\_\_\_

**Directions:** Use the image to answer the questions below.



<https://www.canaryadminsolutions.com/roundabout-rules/>

What does the image above communicate? \_\_\_\_\_

\_\_\_\_\_

What do the colored lines and the words BIEN and MAL signify? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

If a driver has never experienced a roundabout, how confusing is this? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

How might drivers learn how to properly navigate roundabouts? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_



Name \_\_\_\_\_

Date \_\_\_\_\_

Class \_\_\_\_\_ Per \_\_\_\_\_

Teacher \_\_\_\_\_

## **Roundabouts vs Traffic Lights**

### **K-W-L Chart**

**Directions:** Complete the **K** and **W** sections prior to watching the video. After you have seen the video, complete the **L** section and the boxes at the bottom.

<b>K</b>	<b>W</b>	<b>L</b>
What I know about traffic lights and roundabouts?	What I want to know about traffic lights and roundabouts...	What I've learned about traffic lights and roundabouts...

How do traffic lights affect ordinary citizens?	How can creating more roundabouts affect U.S. citizens?	List some benefits of converting traffic lights to roundabouts.
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Name \_\_\_\_\_

Date \_\_\_\_\_

Class \_\_\_\_\_ Per \_\_\_\_\_

Teacher \_\_\_\_\_

## **Roundabouts vs Traffic Lights Venn Diagram**

**Directions:** Complete the Venn Diagram to compare and contrast roundabouts and traffic lights.

Roundabouts	<b>Similarities</b>	Traffic Lights