

# Connect to life

## Activity notebook

12-16 year-olds



Fundación  
**MAPFRE**



*Connect to life*. Activity notebook for 12 to 16 year-olds, 2015.  
Accident Prevention and Road Safety in the Classroom Program.

# Connect to life

## Activity notebook

The Accident Prevention and Road Safety in the Classroom Program is an initiative of the Accident Prevention and Road Safety Area of FUNDACIÓN MAPFRE, aimed at all educational levels for 3 to 16 year-olds attending teaching centers to foster the prevention of accidents and best practice on the roads.

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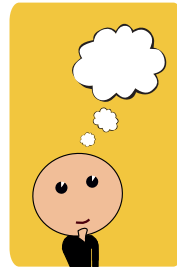
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# Symbology

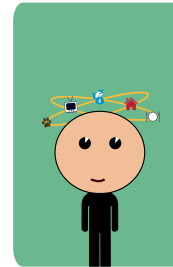
Reading and understanding activity



Imagination activity



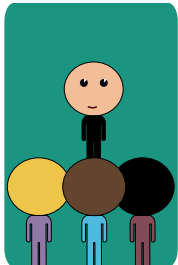
Reflection activity



Analysis activity



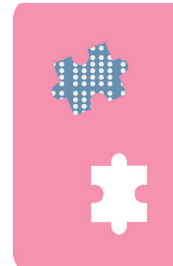
Enactment activity



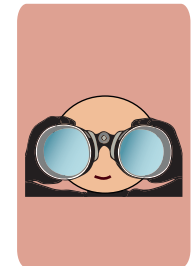
Investigation activity



Connection activity



Observation activity



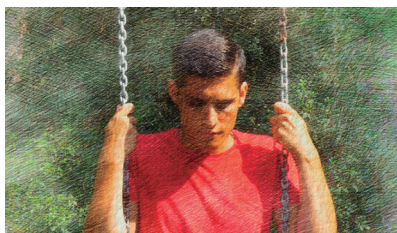
Did you know that...?

*did you know?*

Experiment



# ACTIVITY 1



## Reading comprehension

- After reading the story “Conectarse a la vida”, now demonstrate that you have understood it. First, put the following events of the story in chronological order:

EVENT	ORDER
At the beachside campsite, Doña Quiteria heads towards the pine wood where her family is waiting for her.	
A stranger steals Pablo’s bike.	
Irene, Pablo and Virginia go on a hike to explore a mysterious nearby cave.	
The twins rush into their house to tell their father what their grades are.	
Irene’s father, Tomás, advises that the smuggler has been captured.	
On their way home on the regional road, the Manzanedos find a puppy.	
The families agree to get together soon at Doña Quiteria’s house.	
With the bicycles fully prepared, Jorge, Virginia and Pablo ride along the greenway.	1
Pablo and Virginia go home on the school bus.	

Pablo reveals to Tomás the place where he believes the jewels are hidden.	
Irene Two Wheels shows Pablo and Virginia how to ride a moped.	
Pablo loses Socrates and goes off to look for him.	
The Manzanedo family meets Irene and Doña Quiteria’s family.	
Pablo wakes up suddenly in the night and, approaching the window, sees the shadow of a man running towards Doña Quiteria’s house.	
The policemen tell Jorge and his family that there are no reports of a missing dog.	
Irene on her moped and the twins on their bikes set off on a ride down a local road.	

- Now answer the following questions:

- What is Virginia’s understanding of what a greenway is?
- Why is it that the Manzanedos invite Doña Quiteria to start her vacations with them?
- What strange thing does Pablo observe by the apple tree planted in the kitchen garden at home?

What is the eventual explanation given for what to read into this observation?

4. Why do Jorge and Amelia exchange seats during the car journey to the campsite?

Where and when they do it?

5. Which two techniques does Irene show the twins for learning to ride a scooter?

What do they involve?

6. Why do the Manzanedos go to a beachside campsite?

Who objects to the idea and why?

7. During the vacations, both Pablo and Virginia discover their true vocations. What do each of them want to do when they are adults?

What has led them to think this way?

8. According to Irene, who has right of way at a roundabout? How should you cross them?

## ACTIVITY 2



### Preventing accidents on board buses. Behavior

Despite the pushing and shoving, Pablo and Virginia show that they know how to behave on the school bus. The monitors try to impose some order, not a very easy task taking into account the numerous group of students traveling on board.

- Put yourself in the place of a monitor. Imagine that your local town or city council has given you the job of controlling and supervising the bus journey of a group of young children going off on a weekend excursion. The main objectives of your role are to:

1. Prevent potential mishaps.
2. Discourage lack of respect and bad behavior.
3. Guarantee the safety of the travelers.

– Bearing in mind these objectives, what guidelines would you give to these children?

Produce a script containing the information to communicate to them before getting on the bus, once they are on board, when they are about to set off and at the moment they get to their destination. Remember that you can take some guidance from the monitors in charge of the bus carrying Pablo and Virginia. Apart from that, you can take into account aspects such as cleanliness, vocabulary, food, objects, etc.

#### Before boarding the bus

#### Upon entering the bus

#### Upon setting off on the journey

#### Upon arriving at the destination



- Now, attempt to portray in class the content reflected in your script. In this enactment:

1. Your teacher is the bus driver.
2. Your classmates are each of the children to whom you have to give your instructions.
3. The classroom door or doors and windows form the equivalent of the doors and windows of the “bus”.



## ACTIVITY 3



### Safety in the car

Jorge makes sure that his entire family adjusts their headrests correctly before setting off to the shopping mall. As he rightly says, this offers protection in the event of sharp braking and avoids whiplash.

- What is whiplash? Do some research into it.

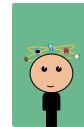
*did you know?*

To position your headrest correctly, you must take height and distance into account.

- Adjust the height of the headrest so that its upper edge is positioned between eye level and the top of your head.
- Adjust the seat so that the distance between your head and the headrest is minimal (not more than 4 cm)

- Despite being a short journey, in that the shopping mall was very close to the Manzanedo home, Jorge does not allow Pablo to sit in the front seat of the car. According to him, traveling in the back considerably reduces the risk of sustaining injuries in the event of an accident. Moreover, when replying to Virginia, he specifies the central back seat as being the safest one.

Why do you think that seat is safest?



- The central back seat is the safest so long as you always wear a fastened seat belt, something that is also essential for all the other seats in the car because, as Jorge says, wearing a seat belt makes all of the seats safer.

Discuss in class to find answers to the following questions:

1. Have any of you heard of Lady Di?
2. Who was she?
3. What tragic event befell her?



– After that, read carefully the following extracts from articles and news published with regard to what happened to Di.

Diana, Princess of Wales, also known as Lady Di, passed away on 31 August 1997. That same day the princess was involved in a car crash inside the tunnel of the Pont de l'Alma in Paris. Her companion Dodi Al-Fayed and the driver Henri Paul died with her. The only survivor was Dodi's bodyguard. According to comments made after his death, it seems that the driver was driving under the effects of alcohol and antidepressants. He lost control of the vehicle after accelerating to avoid being followed by the 'paparazzi'.

Everything seems to indicate that none of the three people killed were wearing a seat belt. Trevor Rees-Jones, the princess's bodyguard, who was sat alongside the driver and who was wearing a seat belt was the only one of the four passengers of the Mercedes S 280 to survive the accident. The airbag protected Lady Di's guard from the impact of the column, the most severe one, but it couldn't prevent damage to his face in the second impact against the wall on the opposite side of the tunnel, on the right hand side.

In the opinion of the former chief of Scotland Yard when he presented the report, both Dodi and Diana would have been saved if they had put their seat belts on. "This much is clear. If they had been wearing seat belts they would not have died. But we cannot determine why the princess was not wearing hers while the bodyguard wore his", he added.

If Diana had been wearing a seat belt it is very probable she would have survived the terrible crash, sustaining injuries but not life-threatening ones. The opinion of Professor Richard Cuerden, head of the Birmingham Automotive Safety Centre at the University of Birmingham, formed part of a worldwide debate between automotive safety experts sparked by Lady Di's fatal accident. In a crash in which a front seat passenger survives, those sitting in the back seat should have an even greater chance of survival with their seat belts fastened, said Cuerden.

– Reflect and respond

1. In which seat was Trevor Rees-Jones traveling when the accident took place?

-Was it the safest seat in the car?

-Why do you think he was the only survivor?

2. If all of them had been wearing seat belts, who do you think had the best chance of surviving the accident?

-Why?

3. Taking into account the consequences of a possible accident, do you think there is a compelling reason for not wearing a seat belt?

4. What other safety device mentioned in one of the extracts could we add to those already covered (seat belt and headrest)?

# ACTIVITY 4



## Using a helmet

Irene has one clear rule: never get on anything with two wheels without a helmet, however hot it makes you feel.

Apart from the heat, what other excuses do you think people could use for not putting a helmet on?

- Think about what arguments the riders or passengers of two-wheeled vehicles (bicycle, moped, motorcycle, etc.) might use for not wearing a helmet. Make a list of “excuses for not wearing a helmet” and note each one of them down here.

I don't wear a helmet because...

-  
-  
-  
-  
-  
-

- Imagine that someone has a traffic accident while riding without a helmet on their two-wheeled vehicle and that they suffer serious head injuries that would have been avoidable had they been wearing a helmet. Their argument for wearing one might be one of those you have noted down above. Do you believe that this argument provides a convincing justification that compensates for suffering these serious injuries? Think carefully about your answer.



- The following table shows data pertaining to a study carried out in the province of Valladolid (Spain). These data show the level of helmet use by teenagers that travel on bicycles or motorcycles (mopeds and motor scooters), as either the rider or passenger, differentiated by sex.

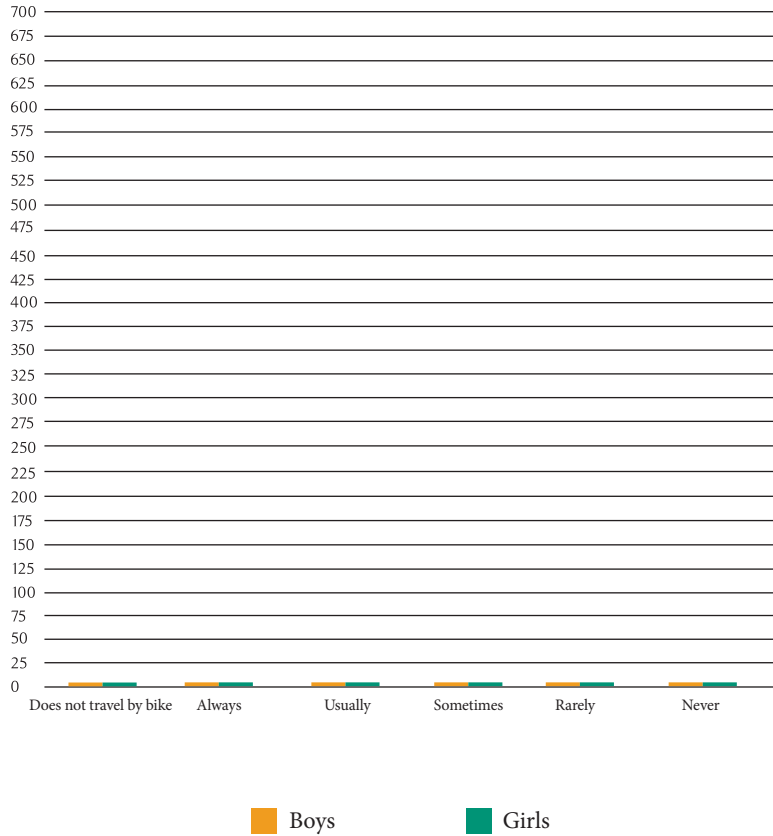
HELMET USE ON BICYCLES AND MOTORCYCLES (RIDER OR PASSENGER) WITH REFERENCE TO SEX				
USES A HELMET		SEX		TOTAL
		BOY	GIRL	
BICYCLE	Does not travel by bike	164	304	468
	Always	71	41	112
	Usually	62	40	102
	Sometimes	94	52	146
	Rarely	184	156	340
	Never	694	547	1241
	<b>TOTAL</b>	1269	1140	2409
MOTORCYCLE	Does not travel by motorcycle	754	736	1490
	Always	418	352	770
	Usually	33	24	57
	Sometimes	24	15	39
	Rarely	15	4	19
	Never	25	11	36
	<b>TOTAL</b>	1269	1142	2411

Source: Fierro Urturi A, Vázquez Fernández ME, Muñoz Moreno ME, Alfaro González M, Rodríguez Molinero L, García Gutiérrez P and collaborators.

Unintentional injuries. Road safety risk factors and participation in water sports by adolescents between 13-18 years old.

– Using the data shown in this table, complete the following graph using bars to demonstrate the frequency of helmet use by teenagers who ride bicycles. Distinguish between boys and girls.

### HELMET USE ON BICYCLES



– Now, in the same way, show helmet use for mopeds and motor scooters for boys and girls.

### HELMET USE ON MOTORCYCLES



*did you know?*

Helmets are compulsory on mopeds and motorcycles for riders and passengers. Not wearing one can incur a severe fine. If the passenger is not wearing a helmet, it is the rider who is liable.

-Analyze what both graphs show:

1. Is helmet use frequent among cyclists? Give reasons for your answer.

Why do you think this happens?

2. Is helmet use frequent among motorcyclists? Give reasons for your answer.

Why do you think this happens?

3. Generally speaking, which sex uses helmets more?

What might the reason be behind this difference?

4. Based on the data in the table, which means of transport do teenagers use most, bicycles or motorcycles?

Why do you think this should be?

## ACTIVITY 5



### Types of helmets

Thanks to the previous activity you have been able to verify that no excuse is adequate for not wearing a helmet on any two-wheeled vehicle, be it a bicycle, moped, motorcycle or any other type. Nevertheless, as Irene makes perfectly clear, it is not always the case that just any kind of helmet is adequate to reduce injuries suffered in the event of an accident, as not all of them are officially approved. To ensure that they are, you must check the label which should carry wording similar to the following:



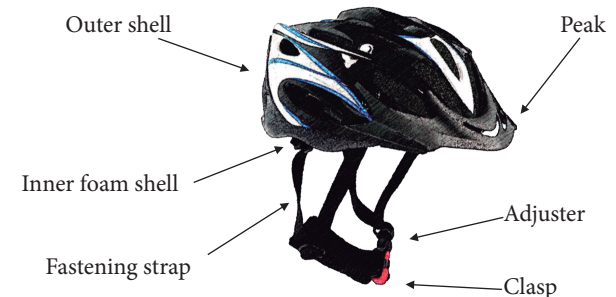
Officially approved helmet for bicycles



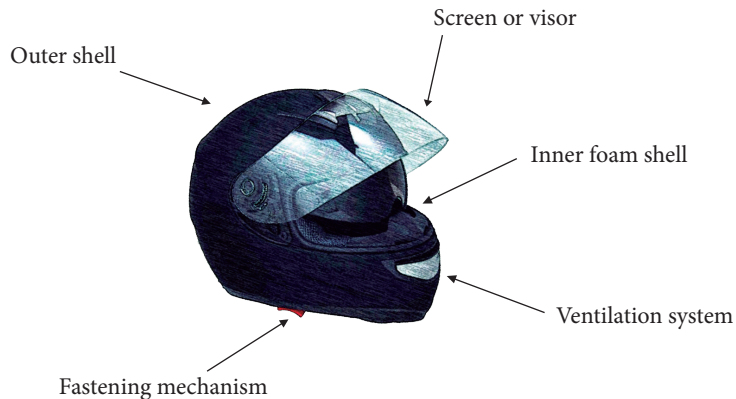
Officially approved helmet for mopeds and motorcycles

- In the following images we show you two examples of officially approved helmets, one for a bicycle and one for a moped or motorcycle (the full face type, as this offers better protection). For each of them there are arrows that show their component parts.

### BICYCLE HELMET



## MOPED/MOTORCYCLE HELMET



– After looking at the two images answer the following:

1. What similarities do you find between the two types of helmet?
2. What function do you think the inner layer of foam performs in each helmet?
3. Why do you think that the full face helmet has a ventilation system?
4. Which type of helmet do you believe to be heavier?

What do you think the reason is for the difference in weight?

5. Which type of helmet has more surface area on the outer shell?

For what reason?

6. Would a bicycle helmet be suitable for riding a moped or motorcycle or vice-versa? Give reasons for your answer.



- We would next suggest the following experiment:

Split up into groups of three classmates. Each should try to find two helmets similar to the ones shown in the pictures; duly approved, of course. You can ask to borrow them your parents, aunts and uncles or brother and sisters.

Once you are in possession of them, make sure that they are definitely officially approved. With each of them placed on your head in turn, you need to establish if they are appropriate for your physical characteristics. To achieve this you need to assess the aspects suggested in the following tables. Note down if they fulfill the recommended feature or not. Discuss each case. If one of them fulfills all the aspects assessed then you will have come across a helmet suitable for you. If not, at least you will know what to look out for when you go to buy a helmet.

BICYCLE HELMET			
ASPECTS THAT MUST BE CHECKED	NAME	NAME	NAME
The edge of the helmet is approximately one or two finger widths above my eyebrows. When I look up I can see this edge.			
The strap that holds the helmet in place is well adjusted (one or two finger widths between chin and strap).			
The strap clasp is centered just below the chin and on each side.			
The straps make a 'V' shape under my chin.			
When I open my mouth as wide as I am able, I can feel the helmet pressing down on my head.			
The helmet does not move backwards or forwards.			

CASCO DE CICLOMOTOR/MOTOCICLETA			
ASPECTS THAT MUST BE CHECKED	NAME	NAME	NAME
The helmet covers the eyebrows, ears and around the back of the head.			
The helmet does not leave red marks at the front and the pressure points on the head are not uncomfortable.			
The padded interior touches my cheeks without it being an uncomfortable sensation.			
With the straps tightened, if I try to move my head from side to side, the helmet does not move faster than my head.			
The helmet is not too heavy.			
When pressure is put on the part opposite my chin, neither the helmet or visor touch my nose or chin.			

## ACTIVITY 6



### Greenwaysmets

For Virginia, going to the mountains represents a great opportunity to go bike riding on a greenway. As she explains to Pablo, greenways tend to be stretches of old disused railway tracks which are specially adapted for use by cyclists, hikers and horse riders with no cars or motorbikes. She highlights that they are very attractive as they cross over bridges and through attractive countryside, or else they are close to archaeological excavations.

Virginia's has become so interested in greenways that she now has several leaflets with details on the nearest ones.

- Produce your own mural of greenways. To achieve this, look into compiling information on the greenways closest to where you live. Let your mural show aspects such as:

- The historical background to each track: the true origins of each stretch, the reason it was converted into a greenway, etc.
- The attractions of the setting: flora, fauna, rivers, interesting buildings, etc.
- Route: information on the places you pass, different kilometer markers, a route map etc.

– Once your mural is complete, show it to your classmates in class, explaining about all of the greenways you have included in it.

- Taking note of the features that Virginia describes as characteristic of a greenway, now think about or look into another route which in your opinion, even though it is not accredited as a greenway, could be adapted to be one, in that it boasts many of these features.

1. Where is it located and which places does it pass through?
2. What type of traffic normally uses it (hikers, moped riders, cyclists, etc)?
3. What are the attractions of the setting?
4. How would you adapt this route so that it could be categorized as a greenway?



# ACTIVITY 7



## The Bicycle: mechanics, riding and maneuvers

Before setting off to ride on the greenway, the Manzanedos check their bicycles over: brakes, tires, gears, chain, water bottles and seat. All ready to get going. Similarly, anticipating possible breakdowns, they make sure they take a complete bag of spares.

- Look at the elements contained in their bag of spares



– Connect each one of them to those shown on the list below drawn up by the Manzanedo family. To do so, put the appropriate number that corresponds to each of the previous pictures shown.

1. Detachable links for the chain.
2. Clamps or brackets.
3. Set of Allen keys.
4. Spare brake pads.
5. Mini pump.
6. Patch repair kit.
7. Spare inner tube.
8. Tools for removing and fitting the tire.
9. Glue.



- With everything prepared, the Manzanedos start off on the road prior to the greenway, riding in single file and making the appropriate signals for their maneuvers.

Based on what the story relates, work out and indicate the significance of the maneuvers undertaken by Jorge.



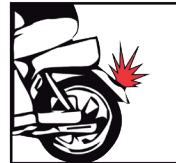
# ACTIVITY 8



## The moped: Maneuvers

Irene receives a fantastic birthday present, the red moped her father has bought for her. Proudly she shows Pablo and Virginia how to ride it and she tells them that whenever possible, any maneuver carried out on a moped should be communicated using the appropriate indicator light. This is one of the main differences with respect to riding a bicycle for which, as we have learned, maneuvers are communicated by signaling with your arm.

- Use arrows to link the maneuvers being communicated by the cyclist with the equivalent indicator light signals on the moped.



Now try to complete the following table:

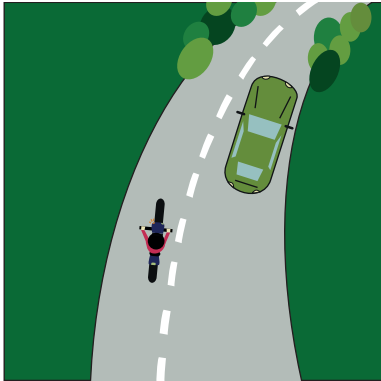
## MOPED

Indicator signal light	Color of the signal light	Intermittent? (YES/NO)	Maneuver indicated



- According to Irene, overtaking is the most dangerous maneuver to complete, which is why she tells Pablo and Virginia to do it using extreme caution.

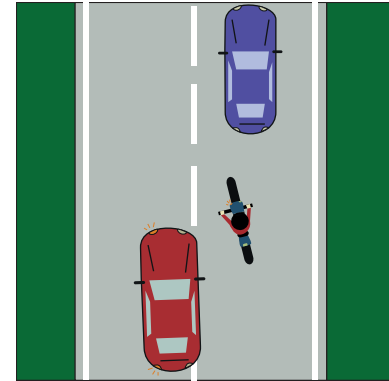
Look at the following images taken from a moped that is overtaking. Explain why the overtaking maneuver is incorrect bearing in mind the instructions that Irene gives to the twins.



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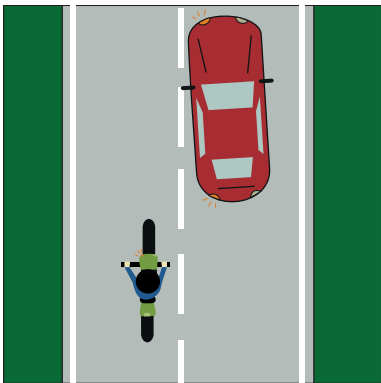
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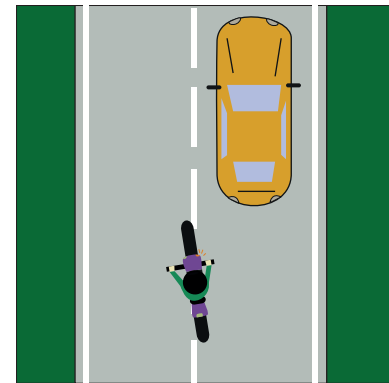
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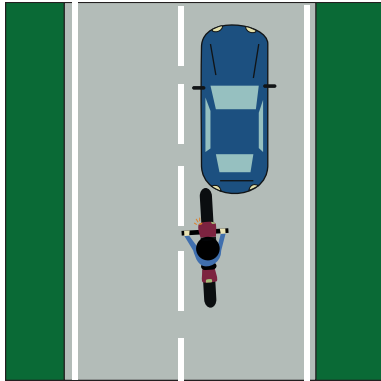


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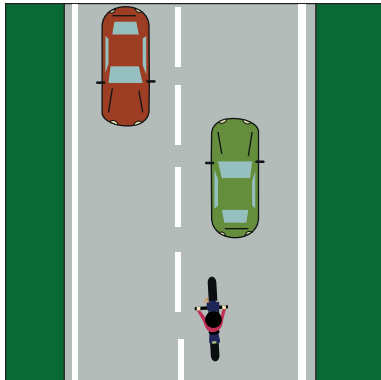
## ACTIVITY 9



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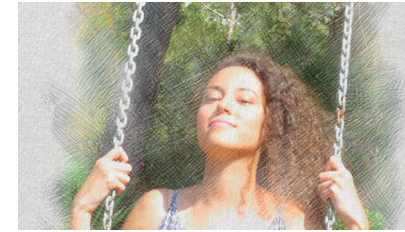
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### The moped: license

Irene can take full advantage of her birthday present because, thanks to her hard work, she has obtained a license to be able to ride her moped, which means she has the requisite knowledge and skills to do so.

*did you know?*

The minimum age required to be able to ride a moped is 15 years old and you must be 18 years old to carry passengers.

To obtain the license it is necessary to pass a theoretical knowledge test (20 questions to answer with two errors permitted) and practical test to demonstrate skills and behavior on a closed circuit.

#### • Discuss in class:

- Do any of you ride a moped?  
Was the examination to obtain the license difficult?  
What did you find the hardest part?
- Who would like to take it but their parents won't let them?  
Why won't they let you?
- Do you think it's dangerous to ride a moped?  
Why?

- Test your knowledge! Use this experiment to demonstrate that you would be capable of obtaining your moped license.

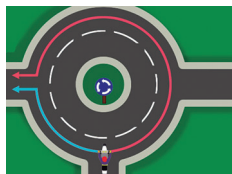
Following on below is the “Conéctate a la Vida” Test. It consists of a set of questions taken from tests published by the Directorate-General of Traffic (DGT) for obtaining a moped license. Use what you read in the story and what you have learned in the previous activities to try to answer each selected question correctly.

If you already have a license then you should have no problem.

1. Who should wear a crash helmet on a moped?
  - a) Both the rider and the passenger.
  - b) Only the rider.
  - c) In town, neither the rider nor the passenger; outside built-up areas, both of them.
2. On the road, should a moped usually travel on the hard shoulder?
  - a) No, only when there are other vehicles on the road that could hinder normal progress.
  - b) Yes, when it is passable and adequate.
  - c) No, only in the event of an emergency.

3. This moped rider is going to turn left at the roundabout. What line should he/she follow?

- a) The blue route.
- b) The red route.
- c) Either of them.



4. Can a moped use the road shown in the photograph?

- a) No, because traveling on freeways is prohibited.
- b) Yes, but sticking to the hard shoulder.
- c) Yes, but only during the day.



5. As a general rule, how should moped riders signal the maneuvers they are about to make?
  - a) Indiscriminately using either their arm or the indicator lights.
  - b) With the indicator light or, if that is not possible, with their arm.
  - c) With acoustic warnings.
6. To be able to carry an adult passenger on a moped, what minimum age must the rider be?
  - a) 15 years old.
  - b) 16 years old.
  - c) 18 years old.

7. At this roundabout, which vehicle has the right of way?

- a) The yellow vehicle.
- b) The moped.
- c) The blue vehicle.



8. In the event of poor visibility, it is prohibited to...

- a) Ride on the hard shoulder.
- b) Moderate your speed.
- c) Overtake.

9. On this road, is the moped rider in the correct position?

- a) No.
- b) Yes.



## ACTIVITY 10



10. When circumstances permit, can the moped driver overtake the cyclist and tractor in the photo at the same time?

- a) No.
- b) Yes.



– After pooling the answers together in class and establishing which the correct ones are, now note down the results achieved:

No. correct	
No. wrong	

As we mentioned previously, the actual theory test to obtain a moped license consists of 20 questions in which you can only make a maximum of two mistakes.

Bearing in mind that here you have answered 10 questions you should have answered them all correctly or made only one mistake to be able to pass the test.

Did you pass our “Conéctate a la vida” Test?

### Final puzzle

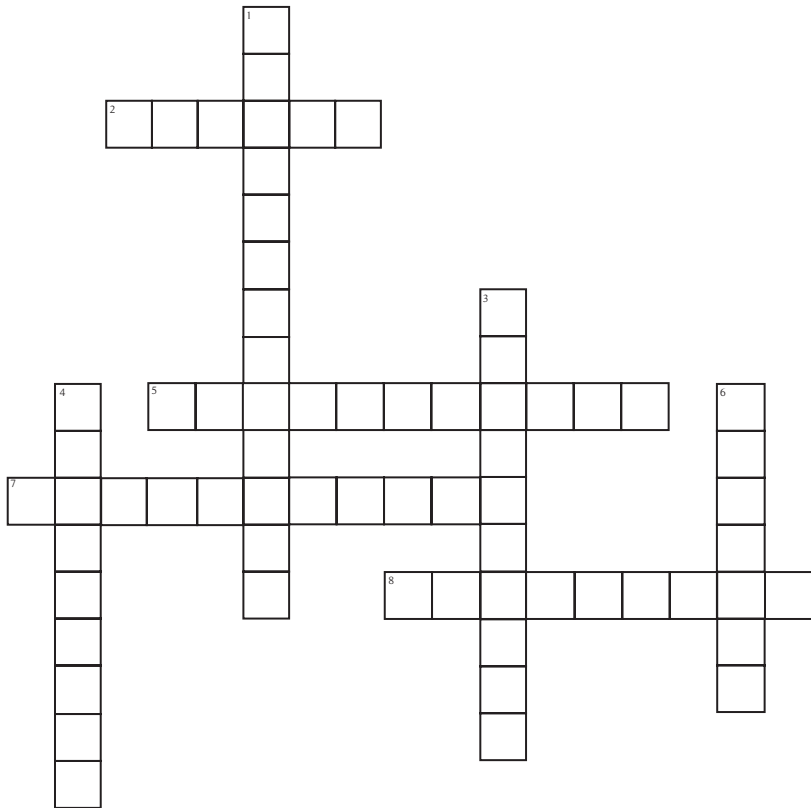
- To make sure you don't forget anything, try to solve the following crossword. You will find the answers based on what you read in the “Conectarse a la vida” story.

#### Down

1. It doesn't exist on greenways. On them, you only breathe in nature.
3. We use it to load bicycles onto the car.
4. Type of clothing that helps to protect you from heavy falls off a moped.
6. They turn into tiny missiles when we brake sharply.

#### Across

2. We must check them before setting off on a bike journey.
5. Useful for your pet's journey.
7. Vehicle that is prohibited from traveling on a greenway.
8. Type of advance signaling for an unexpected stop.







Continue to learn  
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