

4th grade

Travel detectives



location: _____

name: _____

date: _____

It's now your turn to try to explore the level of traffic and other surroundings of your school in order to find out if there are enough measures being taken so that you and your friends are safe while being on the streets.

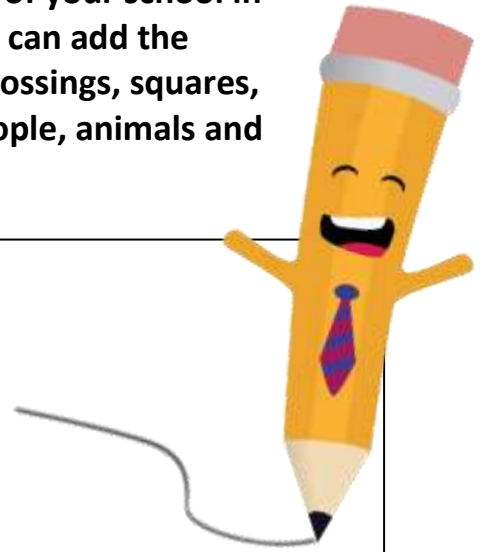
You are going to be a real travel expert! For this investigation into the surroundings of your school, you need a measuring tape or a folding ruler, a stop watch or a clock with a second hand, pencils and a hard pad which you can write on. If you have a camera at home, you can bring it with you in order to take pictures of important places.

Before you step outside to start exploring, you are going to work on some tasks with your classmates inside your classroom.



Task 1: The city map

Try to draw the surroundings of your school in the following blank field. You can add the surrounding streets, paths, crossings, squares, road signs, flowers, trees, people, animals and buildings...



<< Continuation of Task 1: The city map

Try to find your school and your home on a map using the internet with the help of your teacher. You can print out a part of the map where you can see both your school and your home, and this area should be at least two kilometres wide. Use a glue to stick it onto the following blank field.

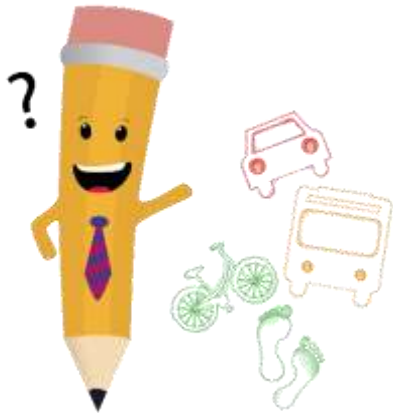
Stick the printed map in here.

If it's too big, you can fold it.

<< Continuation of Task 1: The city map

Use the map that you have printed out, to help you complete the following tasks: (You can always ask your teacher for help.)

- Use a colored pencil to mark your way to school on the map.



Use a green pencil if you get to school by foot or by scooter or bike. Use an orange pencil if you get to school by bus (school bus or public transport). Use a red pencil if your parents take you to school by car, taxi or van.

- Try to guess the distance between your home and your school. The distance is about _____ kilometres long.
- Look for a path that you often use in your spare time. Use your finger to follow the path on the map or take a purple pencil to highlight it.
- Which streets does your teacher use on his or her way to school?

Use a compass to encircle the surroundings which are within a radius of one kilometre around the school. You will need this encircled area for the tasks on the following page.

Task 1 continues on the next page>>

<< Continuation of Task 1: The city map

Now try to answer the following questions about the area that you have encircled with a compass, and including all the paths you have marked.

- How many main roads can you find?
- What are the main roads called?

- How many junctions can you find?

- Which junctions seem dangerous to you?

- Can you find paths for pedestrians or cycle paths on the map?

Yes No

- If there are paths for pedestrians or cycle paths, you can highlight them in your drawing on the first page.
- Do you know any paths that are not marked on the map?








Yes No

If you know any other paths, you can mark them on the map.

Task 7:

Observing the traffic

For the next task, it is best to form groups of four. After the groups are formed, you can start searching for a good spot at the edge of a road near the surroundings of your school, but not the school street itself. You should have a good overview of the street, but take care to stay on the pavement or by the footpath. Now, two group members count the different types of transport that are passing by for a period of one hour, each taking turns every 15 minutes. Draw a line for each means of transport in the correct cell of the 'Tally sheet' column. After you finished your observation you need to add all the lines up and write the sum into the corresponding cell on the right side column. There is an example in the second row that shows you how it's done.

Means of transport	Tally sheet	Sum
Example		
 by foot		8
 bicycle, in-line skates, skateboard, scooter		
 motor-bike		
 bus/train/tram		
 truck		
 car		
sum total		

Task 3:

Testing the street

Now, it's time to observe the street that is directly in front of your school. Look at both sides of the street. Be careful and don't run. Try to answer the following questions.

In which town or district is the street located?

What is the name of the street?

Is there a pavement or sidewalk?

Yes No If there is one, try to measure its width.
The pavement is _____ meters wide.

Is there a grass verge between the street and the pavement?

Yes No If there is one, try to measure its width.
The grass verge is _____ meters wide.

Is there a cycle path?

Yes No If there is one, try to measure its width.
The cycle path is _____ meters wide.

Are there parking spaces for cars?

Yes No If there are some, how many cars parked there?
_____ cars parked there.

How wide is the street?

The street is _____ metres wide, and has _____ lanes.

Is there a place where you can park your bicycle?

Yes No

How many bikes would fit on one parking space?

Try to guess first: _____.

Now try to measure it: _____.

Task 4:

Test your living environment



The city or the village you live in is not a racetrack, and it's also not a big parking lot for cars. You want to live there in peace, as well as meet your friends to play with them. In order to be able to do that, you need places and spaces where you can go, without needing your parents.

Look around. Where do you feel most comfortable? What annoys you, and what is missing? Mark the statements that are true with a cross.






- I have to wait for a very long time until the traffic light turns green, or the traffic passes, so I can cross the street.
- The traffic lights turn red, after I have only crossed half of the street.
- I need to take a diversion, so that I can reach the other side of the street safely.
- There are not enough zebra crossings.
- The streets are too wide.
- The edge of the pavement is too high for me.
- The pavement is too narrow.
- There are no places to park my bike or scooter.
- The place where I park my bike/scooter should be covered with a roof.
- The cycle path should be better.
- Parked cars are blocking the cycle path.

<< Continuation of Task 4: Testing your living environment

Enter your results here:

In total, _____ different types of transport were counted. We have counted _____ motorised vehicles (cars and trucks), _____ non-motorised vehicles (bicycles) and _____ public transport services (buses/trams). One hour has 60 minutes. How many vehicles in total did you count in one hour? _____.

At the same time, the other two members of the group should count the number of people sitting in each car or truck passing by, taking turns similarly for one hour. Enter your results in the spreadsheet below.

Amount of people in the car	Tally sheet	Sum
 1 person		
 2 people		
 3 people		
 4 people		
 5 or more people		
Sum total		

Enter your results below:

In total, _____ cars were counted.

_____ cars were filled to capacity (5 people).

There were _____ cars with only one passenger.

<< Continuation of Task 4: Testing your living environment

- The pavement suddenly stops.
- Cars are parked on the pavement.
- There are no places to play.
- There should be more paths for pedestrians.
- There are not enough trees and bushes.
- There are not enough benches for sitting.
- Cars block my view.
- The cars drive too fast.

Take a photo of your favourite place in the surroundings of your school and stick it in here!

If it is too big, cut out the most beautiful part of the picture!

Why do you like this place so much?

Task 5:

Testing the traffic lights (if applicable)

If there is a traffic light and a lot of traffic in the surroundings of your school, you can go there and observe the situation for 15 minutes. Use a stopwatch to measure the waiting time at the traffic lights for cars and pedestrians to cross. Afterwards you can compare your results.

- How long is the green phase for pedestrians?

_____seconds

- How long is the green phase for cars?

_____seconds

- How long do pedestrians have to wait until the traffic lights turn green again?

_____seconds

- How long is the red phase for cars?

_____seconds



Does everyone have to wait the same amount of time? If not, why do you think it's not equal?

Task 6:

Bus Stop Test

Are the bus stops in your surroundings in a good condition?
Look at them more closely, and answer the following questions.



Is there a place to shelter?

Yes No

Does the bus have to stop on the street, or is there a bus stop or bus bay?

Yes, on street No, on stop There is a bus bay.

Is there a timetable at the bus stop that is easy to understand?

Yes, there is a timetable at the bus stop that is understandable.

No, the timetable isn't easy to read or it's difficult to understand.

There is no timetable information at all.

Where do the bus lines go to?

What applies to your tram, bus or train connection? (if you have one)

The tram, bus or train connection doesn't arrive on time very often.

The tram, bus or train is often overcrowded.

I have to wait for a long time when I want to change to another tram/bus/train.

The task continues on the next page>>

<< Continuation of Task 6: Bus Stop-Test

How do adults on buses, trams or trains treat you?

- very friendly friendly not very friendly

Do you get up when another passenger needs the seat?

- Yes rarely never

What could be done differently in order to improve the tram/bus/train service or station?

Task 7:

Using your senses

Seeing, hearing, smelling

There are many people and things involved when it comes to travel, and there is much to watch out for. The next time when you are on your way to school or on your way home try to observe everything closely, listen carefully and smell actively. What did you experience?

What I saw:

What I heard:

What I smelt:



Did you experience anything special?

Task 8:

The street tells a story

Once upon a time there was a street in the beautiful city called Graz. The street was wide and bright, and it was full of beautiful buildings. There was a big school, a kindergarten and several apartment buildings. They were tall, but the road could still see the roof gutters of the buildings. When it rained heavily, raindrops dripped from the gutters down to the ground. Consequently, small puddles were formed.

The street was happy about this because the light was reflected in the puddles, and sometimes children looked into them and saw their faces. Some children, especially the smaller ones, jumped straight into the puddles, causing it to spatter in all directions. This made the street very happy. She loved it when children jumped or strolled on her. She also liked it when they were just there, standing and chatting. The little kids didn't weigh much, so it didn't take a toll on her.

This, however, was not the case when a heavy truck came along. In fact, it was really exhausting for the street. She felt the pressure of the weight, and she inhaled all the horrible exhaust fumes. Sometimes she really wasn't feeling well. She was also annoyed by all the taxi drivers who used her as a shortcut. They didn't want to stop at a nearby traffic light, so they drove past her and the school.

The street had been observing this for a long time. She didn't like this at all because she felt it was dangerous and stupid, so the street was thinking about how to solve this problem.

After some time, she came up with a solution. She started to frown which caused a small crack in the ground. When it rained the crack got larger until it eventually became a pothole.

The street laughed, and so the hole became even deeper. That's exactly what she had wanted in the first place. From then on, the taxis and the other cars drove very, very slowly because they didn't want their car to break. The children were then able to easily go from one side of the street to the other.

<< Continuation of Task 10: The street tells a story

The street as well as the kids were very happy. But after a few weeks, the hole was discovered, and it got repaired. Immediately the cars speeded through the street, and the road was once again dominated by the moving vehicles and not by children. This made the street feel sad again and she got even more sick than she already was. She was also coughing because of the fine dust that is emitted by all the cars. She got tired, fell asleep and started to dream. It was a wonderful dream: the kids came out of the school with buckets full of paint and paintbrushes, and they painted enchanting colourful patterns on the street. A group of children built a beautiful barrier of plants and stones so that no cars could pass. The children could not believe how much space they had created because there were no cars driving around. Now there was suddenly room for a fountain, as well as for raised beds with flowers and vegetables.

The kids drew racetracks on the ground for their scooters. The teachers took the children outside to hold the classes outdoors. Suddenly there was so much activity going on.

The dream was wonderful, so it was very hard to wake up. The street couldn't forget about the dream: what if one day her dream would become reality? People and children instead of vehicles. Maybe one day ...

What else could the street experience? Write down your thoughts in the following lines:

Task 9: Measuring steps

It's time to experiment:

Take 10 steps. Then use a measuring tape to measure how far you have come.

_____m _____cm 1 step = _____cm

Now your parents can take 10 steps. Measure how far they have come.

_____m _____cm mother

_____m _____cm father

Now measure how many steps you can take in one minute?

_____steps

Now multiply the length of your steps. I walk _____cm in one minute.

I walk _____cm in ten minutes.

This is _____metres

This is how far you can walk in 10 minutes!



Task 10:

Measuring speed

Form groups of two, and try to complete the following task.



One of you is using a speed camera to measure the speed of the passing cars. He or she should then pass the speed value on to his or her partner, who will write down the information as counts against the different speed categories in the table below. (If you do not have a speed camera, try and estimate the car speeds.)



Speed	under 30 kmph								
	30 – 35 kmph								
	over 35 kmph								

Measured...

on the _____ (MM/DD/YYYY), in the period

from _____ to _____,

location _____ (street, house number)

What is the speed limit along this part of the road?

_____ kmph (You may need to ask the teacher)

How many cars exceeded the speed limit?

Task overview

Which tasks have you completed already?

Tick off what you have completed already.



N°	Name of the task	Done	Examination
1	The city map		
2	Observing the traffic		
3	Testing the streets		
4	Testing your living environment		
5	Testing the traffic lights		
6	Bus Stop-Test		
7	Using your senses		
8	The street tells a story		
9	Measuring steps		
10	Measuring speed		

Well done for doing the tasks!