

Subject: I know the relationship between speed, distance and time.(2 hours, sixth grade)

Lesson plan:

Notes:

T:

Write down subject on your notebook./ Todays subject is:
I know the relationship between speed, distance and time.
Today we're going to talk about the relationship between speed, distance and time. Before we start let's check the key words:

- relationship - Do you know what it means?
- distance - What „distance” in Polish?
- speed- Translate into Polish.
- deal with- Do you know what it means?
- unit- Do you know what it means?
- units- Translate into Polish.
- journey- Translate into Polish.
- average-What ”average” into Polish?
- stand for- Translate into Polish.
- a treadmill- Translate into Polish.

Ps:

- relationship - relacja, związek
- distance - odległość
- speed - prędkość
- deal with -radzić sobie, mieć do czynienia
- unit -rozdział
- units -jednostki
- journey -podróż
- average – średni
- stand for – znaczyć coś, być skrótem od
- a treadmill - stacjonarna bieżnia

T:

In the last unit we deal with units of speed, distance, time.
When do we use expressions like km an hour?

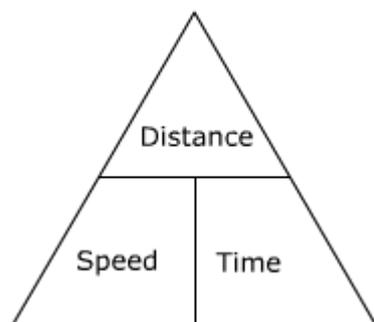
Ps:

When we want to give speed of something like a car, a train, etc.

T:

Could you draw a triangle showing the relationship between speed, distance and time?

Ps:



Whole class activity.

If you want to say something raise your hand / put up your hand.

*Stop talking!
Don't talk! Be quiet! Try speak English.*

T:

What does "s" stand for?

Ps:

It stands for distance.

T:

What does "v" stand for?

Ps:

It stands for speed.

T:

What does "t" stand for?

Ps:

It stands for time.

T:

What do we do if we want to make distance or time the subject of formula?

Ps:

speed= distance : time

time= distance : speed

distance = speed x time

The positions of the words in the triangle show where they need to go in the equations.

To find the speed, distance is over time in the triangle, so speed is distance divided by time.

To find distance, speed is beside time, so distance is speed multiplied by time.

T:

Now let's do exercise 1.

Please, resolve it yourself.

Read the instruction carefully and solve the problems.

Have you finished?

Ps:

Yes, we've already finished.

T:

Read the answers./Check the answer./Let's check the answer.

T:

Now let's do exercise 2.

Please, resolve on your own.

You are going to work in pairs. I'll give you the handouts.

Please, read it carefully and solve the problems.

Write the answer on the separate answer sheet.

If you resolve the whole task correctly you'll get a good mark.

T:

Let's check the answer.

Discussion about units:

T:

The units of length and time have to be chosen to suit the context.

What would you do if speed is expressed in kmph but

Mental work.

It's correct.

It's incorrect.

You are right.

You are wrong.

You have made a mistake.

Write your answers in your notebooks or on the handouts. Everybody has to work. Both students have to work.

Mental work.

Work in pairs.

Let's sum up!

time in minutes?

Ps:

We have to change unites. For example change minutes into hours.

$$15 \text{ min.} = \frac{15}{60} h = \frac{1}{4} h$$

Homework:

4,5/40

These exercises are your homework./ Look at these exercises you must do these at home.

Exercise 1.

Section A: For each question work out the speed, distance or time travelled.

1. A man walking takes 2 hours to walk 10 miles. How fast did he walk?
_____ mph
2. A policeman took 2 hours to travel 100 miles. What speed was he travelling at?
_____ mph
3. A girl ran 105 metres in 15 seconds. What was her speed?
_____ m/s
4. What distance would a car travel after 4 hours travelling at 60mph?
_____ miles
5. Find the distance travelled by a train travelling at 140 km/h for 6 hours.
_____ km
6. If a person runs at 5 m/s, how long will it take that person to run 300 metres?
_____ secs
7. A horse travels at 12 km/hour. How long will it take to travel 18km?
_____ hours
8. A cyclist took 1.5 hours to travel 24 km. What speed was the cyclist travelling at?
_____ km/h
9. How far would an athlete run travelling at 8 m/s for one minute?
_____ metres
10. Find the distance travelled by a horse running at 20 km/h for 30 minutes.
_____ km

Section B: For each question work out the speed, distance or time travelled. (L7)

1. A car travels 50 miles in 1 hour and 15 minutes. Work out its average speed
_____ mph
2. A car travels at 60mph for 2 hours and 40 minutes. How far has it travelled?
_____ miles
3. A car travels at 72 mph for 2 hour and 20 minutes. How far has it travelled?
_____ miles
4. At a health club Tanya uses a treadmill for a quarter of an hour and walks a distance of 1.3 miles. At what speed, in miles per hour has she set the treadmill?
_____ mph
5. The distance from the bus terminals to Amy's house is 3.5 kilometres. The journey takes 8 minutes.. Calculate the average speed of the bus in kilometres per hour.
_____ km/h

Exercises 2.

Person	Where Are They Going?	How Long Does It Take?	Average Speed
Izabella			
Mark			
Ania			
Phil			

Person	Where Are They Going?	How Long Does It Take?	Average Speed
Izabella			
Mark			
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Phil			

<p>1 The average speed of one of the train journeys is 99.6 mph.</p> 	<p>2 Izabella travels 12 miles every 45 minutes.</p>
<p>3 Phil travels 30 miles every 45 minutes. His journey takes the same time as Ania's journey.</p> 	<p>4 The distance from London to York is 186 miles.</p> 
<p>5 Mark's journey takes 50 minutes.</p> 	<p>6 Four people are making journeys. For each person find out where they are going, how long it takes and their average speed.</p>
<p>7 Ania travels at an average speed of 93 mph.</p> 	<p>8 One of the journeys is by bike from York to Leeds, a distance of 24 miles.</p> 
<p>9 The distance from York to Newcastle is 83 miles.</p> 	<p>10 One of the journeys is by car from York to Lincolnshire, a distance of 80 miles.</p> 
<p>11 Izabella's journey is a shorter distance than the others.</p>	<p>12 A train takes 2 hours to travel between London and York.</p> 