

Speed Graph

Level: upper- intermediate (B2/ B2+)

Time : 45 minutes

Aims:

- To learn or revise vocabulary connected with acceleration and speed
- To learn about speed-time graph
- To learn how to use information from graphs
- To develop reading and comprehension skills
- To develop speaking skills

Language functions:

- To describe the acceleration and speed
- To use information from graphs to describe movement
- To calculate displacement from velocity graph
- To contrast and compare
- To transfer information.

CLIL: Physics and IT technology.

Materials: Worksheets and web pages

STAGE	AIMS	PROCEDURE	TIME	MATERIALS
Warm-up activity	The aim of this task is to get students interested in the topic.	1.Introduction Start your lesson by showing the first two minutes of the film from : http://www.youtube.com/watch?v=gWAavCjVQvM . This is the world's fastest car: 270.49 mph. Ask your students to calculate miles into kilometers. Ask your students about the speed limits in the area near school. Then ask them to go to page: http://www.physicsclassroom.com/mmedia/kinema/trip.cfm and look at an interactive activity about average vs. instantaneous speed. Make sure your students understand these two terms.	5 min 5 min	http://www.youtube.com/watch?v=gWAavCjVQvM http://www.physicsclassroom.com/mmedia/kinema/trip.cfm
Main part of the lesson	To make sure students understand the concept of speed and velocity.	1.Theory Tell your students about speed time graphs. Give out Worksheet A with some theory concerning speed graphs. Make sure they understand the text. Explain any vocabulary that is not clear.	5-8 min	Worksheet A

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	<p>To help students to understand and analyze speed graph.</p> <p>To practice speed graphs reading and understanding.</p>	<p>2.Video Tell your student to go to page: http://www.youtube.com/watch?v=JKuIQjJBfYE and watch a video about speed time graphs. After the video make sure your student understand the concept of velocity and speed graphs. One student may explain and present the concept of speed graph on the board (optionally).</p> <p>Then go to page: http://www.youtube.com/watch?v=Spz8WfmREDM and watch a video about the speed time graph.</p> <p>3. Practice To check students understanding of the speed graph and velocity go to page : http://www.brightredbooks.net/subjects/tests/tests?sortBy=n5physics04_02 And give your student some time to do the test on graphs and calculations. Then check the answers and see who got the best result. (There are 8 questions). The student with the best score may get a reward (chocolate bar or a good mark). As a follow-up, ask your students to do the task (worksheet B) and find all the words which were used in previous parts of the lesson.</p>	<p>10 min</p> <p>5 min</p> <p>10 min</p>	<p>http://www.youtube.com/watch?v=JKuIQjJBfYE</p> <p>http://www.youtube.com/watch?v=Spz8WfmREDM</p> <p>http://www.brightredbooks.net/subjects/tests/tests?sortBy=n5physics04_02</p> <p>Worksheet B</p>
Wrap-up	To summarize the material. To revise.	<p>Ask you students to go to page : http://www.brightredbooks.net/subjects/n5physics/c04_02 To make sure your students understand the material asks them to do 3 exercises on the bottom of the page. There are online answers to the questions, so your students may check their solutions. Section: Things to do and think about. Optionally this task may be students' homework.</p>	4-5 min	

Sources:

<http://www.youtube.com/watch?v=gWAavCjVQvM>

<http://www.physicsclassroom.com/mmedia/kinema/trip.cfm>

<http://www.youtube.com/watch?v=JKuIQjJBfYE>

<http://www.youtube.com/watch?v=Spz8WfmREDM>

http://www.brightredbooks.net/subjects/tests/tests?sortBy=n5physics04_02

Credits:

Materials and tasks: www.brightredbooks.net.

In order to use materials, students and teachers must register. (For educational institutions, teachers and students it is free).