

## Distance-time graphs

### Introduction

Hand out a mini whiteboard (or a blank piece of paper) to each learner (or pair of students). Display the graph and three stories in Figure 1 on the board (either by using the PowerPoint slide or by photocopying and enlarging the graph and stories) and ask the students to match the correct story to the graph and to write their answer on their mini whiteboard or piece of paper.

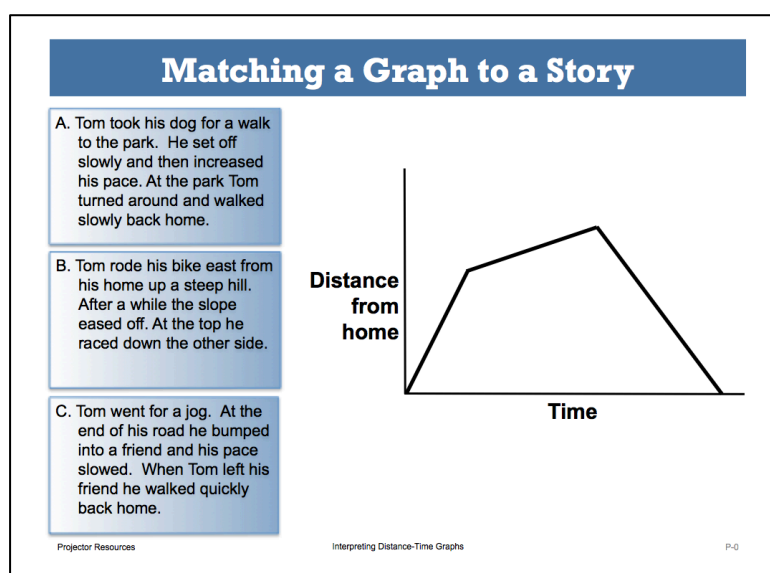
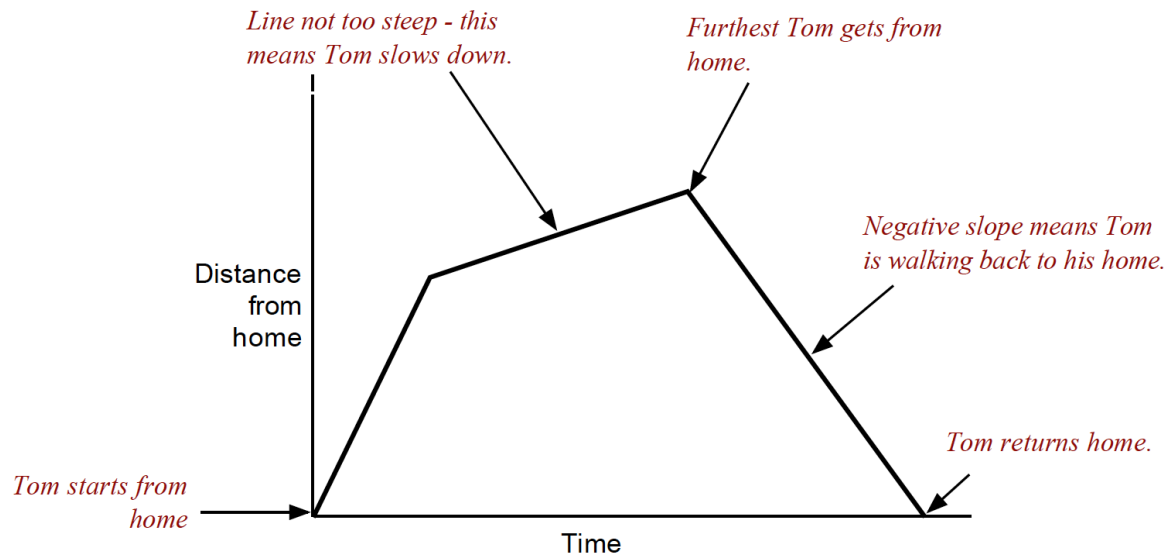


Figure 1: A graph and three stories

Ask the students to show you their answers. Ask one or two students who chose option A to justify their choice. Even if their explanations are incorrect or only partially correct, write them next to the appropriate section of the graph. Encourage the other students to challenge these interpretations.

Repeat this with options B and C.

A graph may end up looking like this:



### Card matching activity

Put the students into pairs. Each pair should have:

- a set of graph cards (A-J)
- a set of story cards (S1-S10)
- a set of table cards (T1-T11)
- a large sheet of paper
- glue or Prestik/bluetack.

Explain that the students should take turns to match a graph card with a story card. Encourage them to explain their thinking carefully and clearly to their partner. They should place their cards side by side on the large sheet of paper, not on top of one another, so that everyone can see them. They should also leave space around the cards as they will eventually be adding the table cards.

You can also share these instructions with the class by using slide 2 of the projector resources.

Some of the cards are deliberate distracters. For example, a learner who matches Card S2 and E (see Figure 3) suggests that they think that graphs are pictures of the situation.

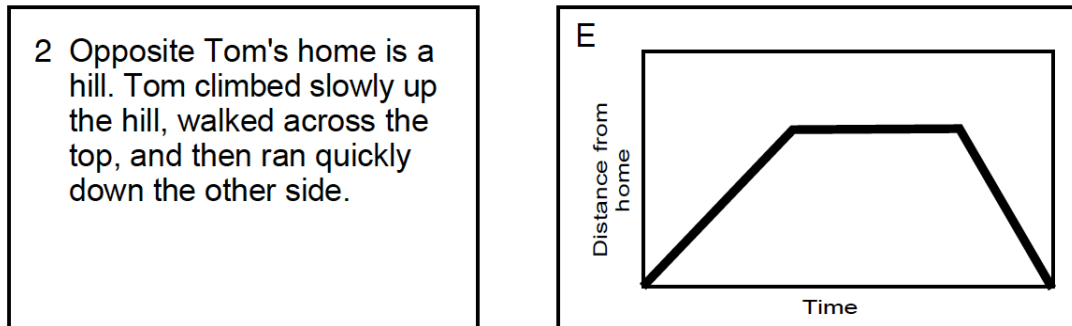


Figure 2: Deliberate distracters

Once students have matched each graph card with a story card hand out the table cards. Explain to the students that they should take turns to match the table cards with the cards that are already on their desk. Remind them to explain their thinking carefully and clearly.

Once they have matched all the cards they should stick them down together on the poster.

Allow the students enough time to do the activity.

Try to avoid telling them the answers. Listen to what they are saying and ask them questions. You may need to ask them about, for example, when Tom is at home or when he is furthest from home.

If some students finish quickly, encourage them to make up their own pairs of cards.

### Discussion

Stick the big versions of the graph cards on the board. Have the big version of the story and table cards on a table at the front of the class. Ask students to come up and find the matching story and/or table graphs for a graph card and to stick these on the board. Alternatively hand out the big story and table cards to specific students and ask them to stick the card on the board under the matching graph card.