Wendella’s journeys

In our game ‘Lost in the Pines’, Wendella the dog is moving at different speeds through Wetlands. We need to use graphs to make several journeys in our game. As programmers you will need to interpret the graphs you draw in this context.

1 Wendella’s first journey

On her journeys, Wendella moves:
- Forwards slowly when she is in the swamp.
- Forwards faster when she is on the path.
- Stops and barks for help when she is in quicksand.

Predict: Using the graph how Wendella will move for this journey. Finish the story below.

Wendella started out quickly on the path. She was happy to be on her journey. Then...

Check by playing the simulation in Investigation 7 Activity 7.1.

Explain any differences between your prediction and what the simulation showed.

2 Here is a different journey that Wendella made.

For each line segment in the graph above, decide where Wendella is (e.g. swamp), record the number of minutes that Wendella has travelled, the number of metres she travelled and her speed. Use the table below to keep the information organised.

<table>
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<tr>
<th>Segment</th>
<th>Where</th>
<th>Minutes</th>
<th>Metres</th>
<th>Speed</th>
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Open activity 7.2 and play the simulation to check your work.
Wendella takes another journey. The graph is shown below.

Wendella does something new here!

A
Look at the graph. Predict her motion in the simulation. Describe her journey.

B
Check by playing the simulation in Activity 7.3. Did Wendella do anything you did not expect? If yes, what did Wendella do?

C
How far does Wendella travel in the first four minutes?

D
How far does Wendella travel between the 6th minute and the 8th minute?

E
Calculate Wendella's speed for each of the four segments of her journey.

We need more stories and journeys.

A
Sketch the graph of a five segment journey for Wendella.

B
Now write a story to match your graph.

C
Using Activity 7.4, edit the graph to show your five segment journey for Wendella. (Remember you can zoom in).

If it is not possible to recreate your journey, can you work out why?