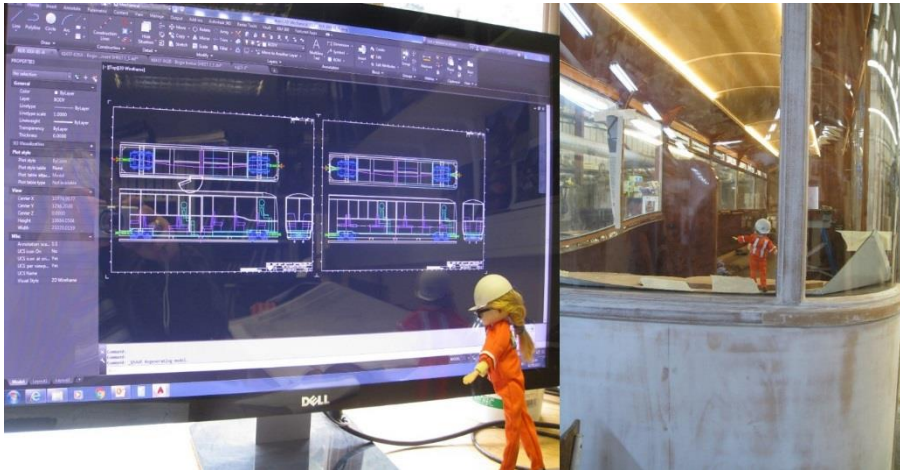


## Lottie on Tour

Monday: We travelled to North Wales to visit the workshops of a heritage steam railway. At the Ffestiniog Railway lots of volunteers and permanent staff members work all year round keeping beautiful steam engines running for us to travel on.



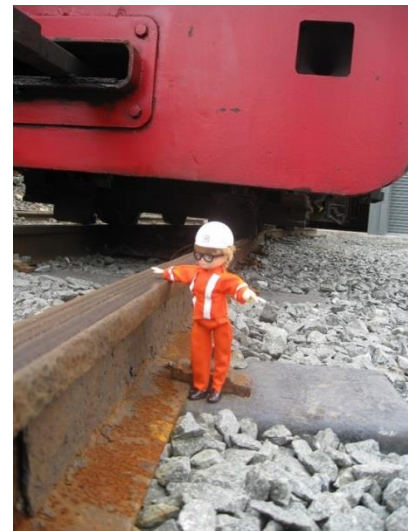
Lottie had a look at the CAD CAM drawings for new carriages and inspected a new carriage being built in the works.

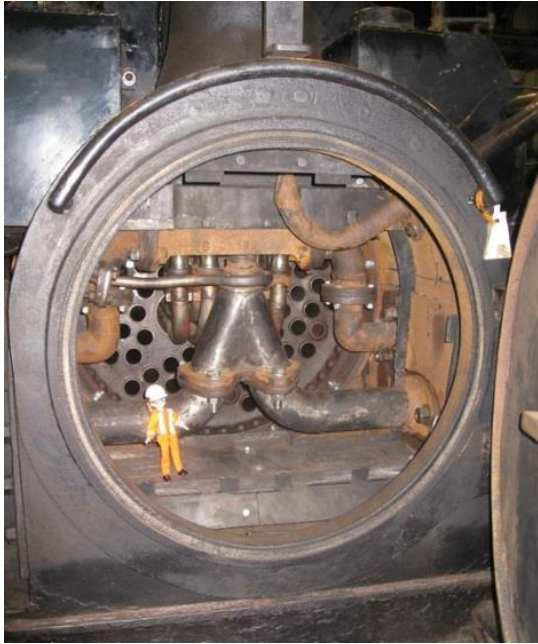
The carriages travel many miles and new ones are needed.

She then went to inspect the track was in good working order. This is a very important job. If the track is damaged there could be an accident when the train runs over it.

To work safely beside the railway Lottie wears a high visibility orange suit and a safety hat plus safety shoes with big steel toecaps in the end.

The bright clothes mean she can be seen by other people and engine drivers and the hat and shoes make sure she doesn't hurt herself. Safety is very important.





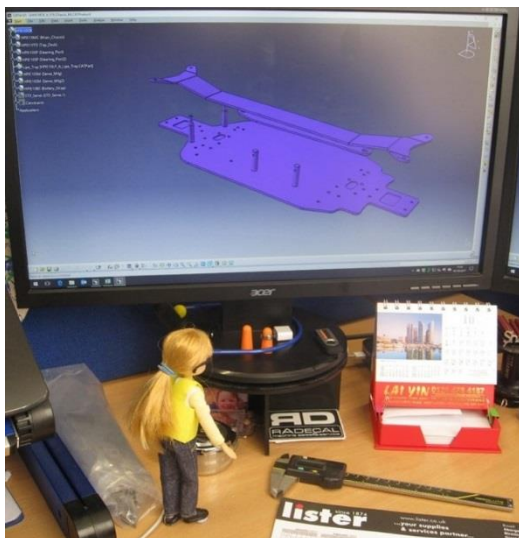
Tuesday: Back inside the works Lottie was asked to inspect the inside of one of the engines. Here she is inside the smoke box checking to make sure there are no cracks or damage. If there was then it would have to be repaired.

Lottie then watched Rebecca machining a part. Rebecca is an Engineering Apprentice who works here, using machines that look old, just like the steam engines. But they still work fine.



Both Lottie and Rebecca protect their eyes with safety glasses and their clothes with overalls, as there is lots of metal flying around

Wednesday: Lottie went to work in a manufacturing company in Birmingham. At Radshape they design and make lots of parts that go into luxury cars like Morgan, Bentley and Aston Martin.



Here Lottie is inspecting the CAD CAM drawings for a part and then conducting a tensile strength test. This is testing the bond between two pieces of metal to make sure it is strong enough to be part of a car.

In this factory Lottie needs to wear a high visibility yellow top, safety shoes and glasses to make sure she is as safe as possible. She also ties her hair back to make sure it doesn't get caught in any machinery.

Lottie's next challenge is to try polishing some of the metal parts to a bright finish. This is the process they used to polish parts for the car the Queen travels in.

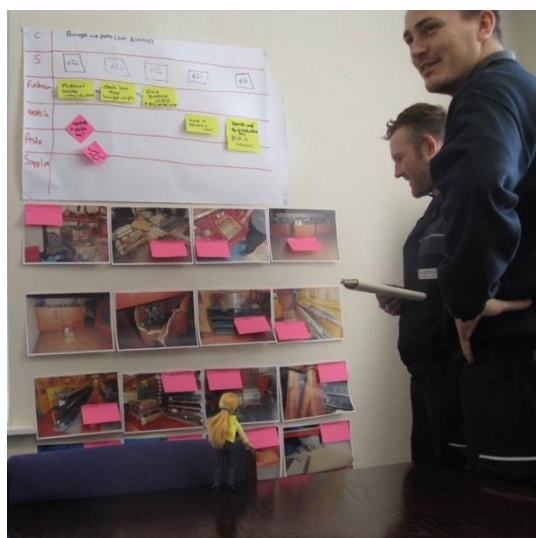
Lottie now has to put on a special apron and protect her hair as well as wearing safety glasses.

She is holding a special tool called a polishing mop and standing in front of one of the big polishing machines.



Thursday: Back at the manufacturer Lottie is helping the team to carry out an improvement activity. Here they are finding out about the materials that they order in, where they are

stored and how many they have. The team want to see if they can improve how they do this and save money and space.



Friday: At the end of a busy week Lottie has been asked into her local school to visit the pupils in the science lab. She is shown the range of exciting books that they have and look, there is even one about a young lady engineer called Rosie Devere.



As well as describing to the pupils what she does at work, Lottie describes how the experiments they are doing and the things they are learning about are used in the world around us. Lottie thinks it's important that we understand how important STEM subjects are. STEM means science, technology, engineering and maths subjects.

Before she finishes one of the pupils shows her what she is using a microscope for and Lottie tells her that she sometimes uses one at work as well, to look very closely at metals.

