

# IED TRAIN PROJECT- FIRE AND DARKNESS

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2nd Period**

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# DESIGN BRIEF

Client: Lionel Train Company

Target Consumer: Children (especially ages (5-10))

Designers: William Louis, Christopher Ninomoto, and Loic Scomparin

Problem Statement: Lionel Train Company has had decreasing sales over the last five quarters, and thinks that it is because children are favoring video games over their classic wooden trains. As a result, they have told our team of engineers to design an online version (with virtual cars) of an exciting and engaging toy train, which needs to be interactive and easily downloadable.

# DESIGN BRIEF CONTINUED

Design Statement: Design and assemble a virtual toy train that follows a specific theme, contains graphics and interactive actions, is suitable for children, and can be easily downloaded to home computers.

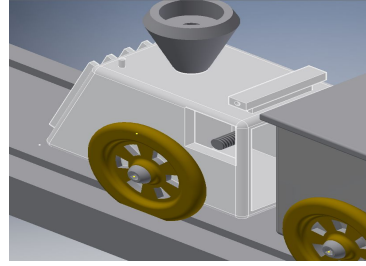
## Constraints:

- All cars must fit on track and use hitch peg and magnet to link up
- Cars should follow a specific theme
- Each car should have a specific purpose within the train
- Cars should have color/match engine
- No inappropriate/violence-inducing themes for children

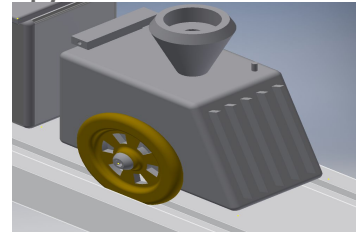
# DESIGN BRIEF-DELIVERABLES

- Train parts
- Train car and engine assemblies
- Train on track assembly
- Exploded view of train on track and all three cars
- At least 11 drawings, 6 of interesting parts, one exploded for each assembled car, and one with sell text for full assembly
- Group Responsibilities form
- Gantt chart

# TRAIN ENGINE

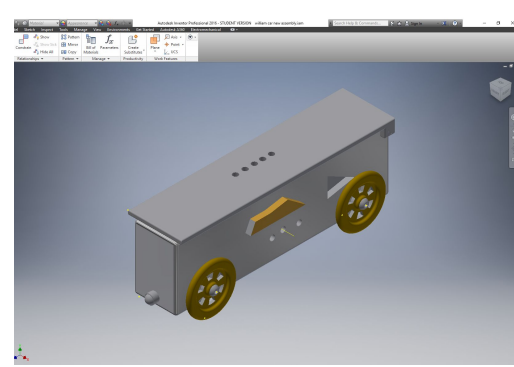
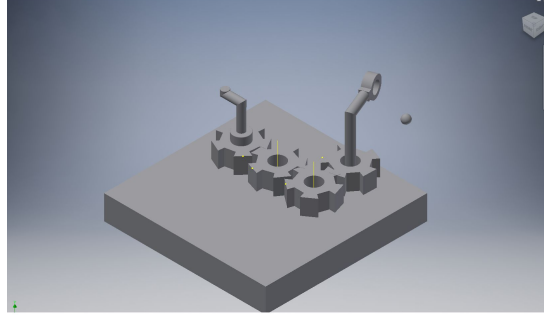


The train engine is the brain of the train. The engine is programmed to guide all the other train cars to their destination. The Train engine is composed of two huge “guiding” wheels, which are special wheels that make the engine go faster. Also there may be lines running on the front of the train...Well, those are invisible solar panels that the train runs on! The Engine is solar powered, which means that the entire train is run on solar energy. See how eco-friendly this train engine is? This is why our engine is so special!



# CONTROL CAR

Designer: William Louis

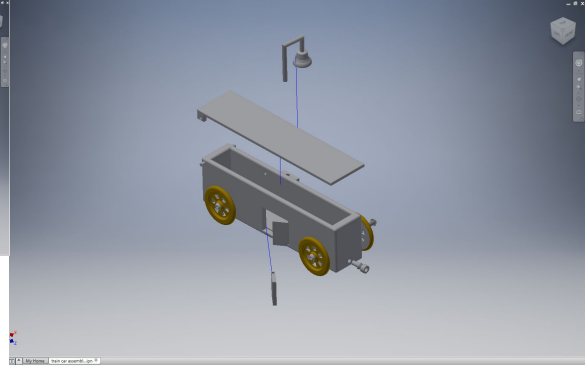
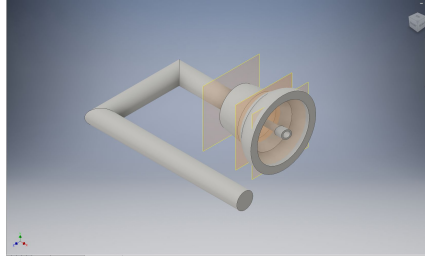


Purpose: To have a main train car right after the engine. The Control car's objective is to keep the two other train cars secure and to guide the other cars towards the route. This car has a peg attached to other cars and the engine. The conductor of the entire train sits in the control car since the engine is programmed to drive by itself in the front. The control car even has a catapult on top of it to take down petty thieves or any malevolent horrors that cross the train's path!



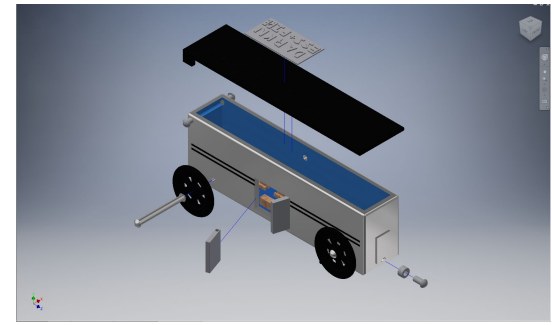
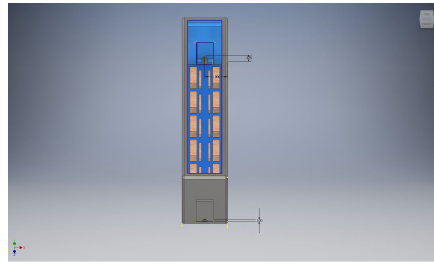
# ENTERTAINMENT CAR

Designer: Loic Scomparin



This train car lives up to its name! The Entertainment Car is where all the passengers of the train can do fun things such as watch a movie, play at the casino, or even play poker with their friends. The Entertainment Car is imperative to passengers because this is what keeps the passengers engaged in something other than sleeping in their bunks. The entertainment car also has a special bell on the top. This bell is programmed to ring when it is exactly midnight so that the passengers can be notified.

# DINING CAR



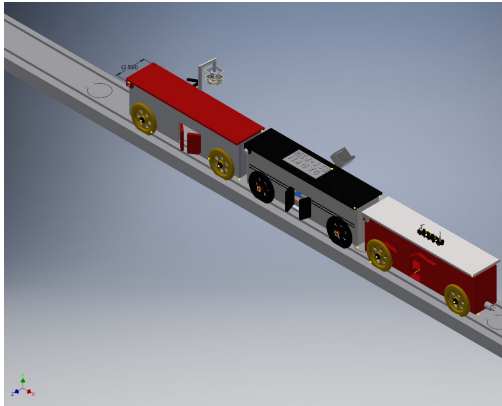
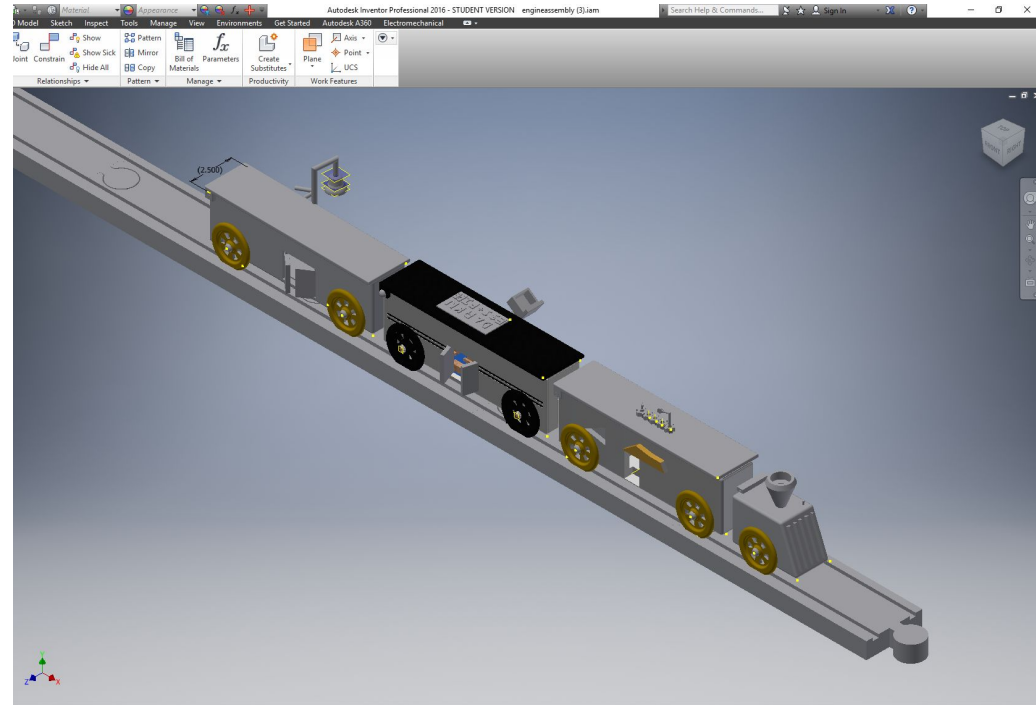
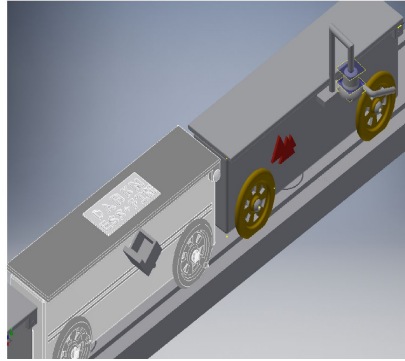
Designer: Christopher Ninomoto

Purpose: This train car is supposed to be meant for passengers to eat exquisite delicacies in their free time! Passengers can relax in huge chairs built into the car while snacking up on their favorite food. A wide variety of foods are offered starting from Sushi to Lasagna. The dining car also has a 24/7 service, meaning that it is open all night with speedy service! Also, there is a fire and darkness emblem on the top of the car, which is used to show off its brand name and to be used as an air conditioner to let the cool air in from outside.

# ASSEMBLY INSTRUCTIONS

- 1) First, have the three assembled train cars and engine with you to assemble. Once you have three trains, then connect each one to another by utilizing the hitch peg and hitch magnet on all of them. Since these parts are magnetic, they will automatically stick together as a train.
- 2) Next, you should make sure the wheels fit the track by pushing it in to make it grounded to the track. Once this happens then the train should be working correctly and moving on the track.

# ASSEMBLY



To the  
left-  
newer  
version  
with  
more  
color

# WHY THIS TRAIN IS WORTH PURCHASING!

This train is suitable for the ages of 7-9, due to its brain stimulating assembly. The train is challenging to assemble for the age groups of 7-9. After finishing the assembly, the child can use this train as a play tool and a brain stimulating assembling tool as well. Also this train is compatible with a new special exclusive Fire and Darkness track that we have made only available for this train. Even after all of this marketing you still want to purchase this special new train dial 1-1-1 and you will get a free rewards card for actually liking our product.

*That's all Folks!*