




What we learned

- Planning & building lead to achievement
- Trains and kids attract each other
- Learn electrical control at safe levels
- Experiment without much risk or cost
- Travel on them, visit museums, education
- It all seems to start at Christmas...



Next Generation

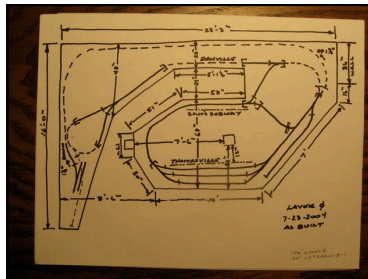
Our Grandkids Began Trains in 2004

- It was a dream: theirs not entirely mine
- Perhaps influenced by their mothers
- It began under our Christmas tree
- We were all much younger then
- And our eyes reflected the light
- Of a circling train... may it not end
- It is a family affair...



Plans and Objectives

- Sketch a plan: talk it over: modify it
- Have kids collect materials & help build
- Teach use of tools: saw, screw, hammer
- How to measure, file and work together
- Joy of accomplishment by doing useful work
- Start building frames and lay the track





Sam's has the idea !



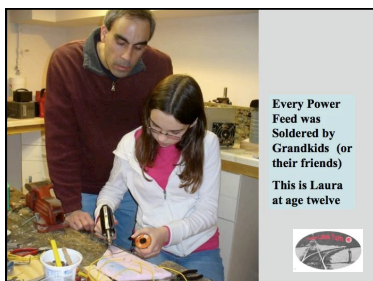
Sam shows Mommy

Simple Steps Add Up

- Lay track and roll some cars
- Wire track and run a train
- Build scenery and run more trains
- Build structures learn business and transport
- Repeat and expand – just like the real world
- Don't like it – rebuild, just like the real world

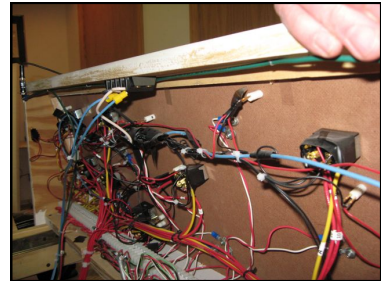
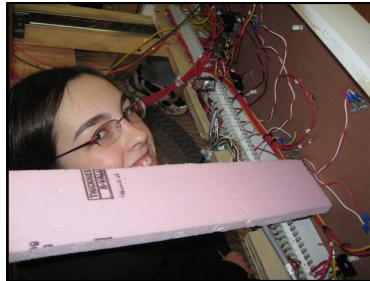
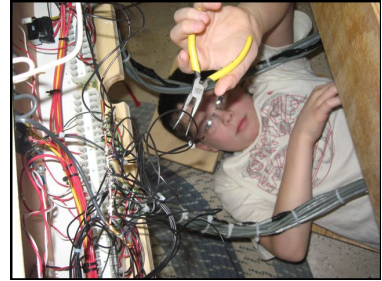


Jim helps Anna and James solder track feed wires of 20 gauge wire




Every Power Feed was Soldered by Grandkids (or their friends)
This is Laura at age twelve





Scenery

- Wood or cardboard Forms
- Screen or chicken wire
- Plaster on paper or rags
- Paint-stain for realism
- Ground cover: pine needles, lichen, bark, dirt, foam..
- It's all a form of 3D artwork





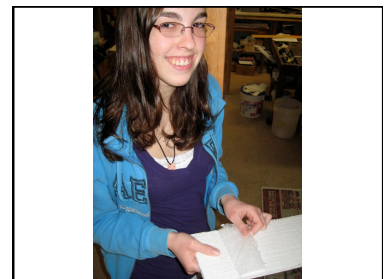

Structures

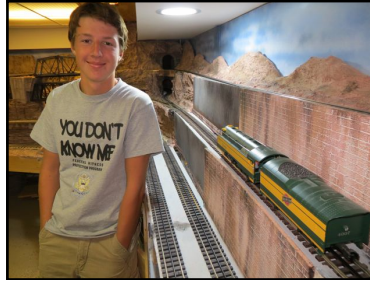
- Starting with a sketch, old shoe boxes, pink foam and plenty of glue & grandchild Anna
- We built a mine called: HERZOR MINE
- The following gives you an idea of our project
- It took a year and is not quite done
- More fun this winter or next



Stone Structures

- Start with the least expensive (cheapest) foam
- Use a hot iron.. and carve rocks
- Everyone in the family participated
- Then, we painted and again everyone partook
- They are convincing walls





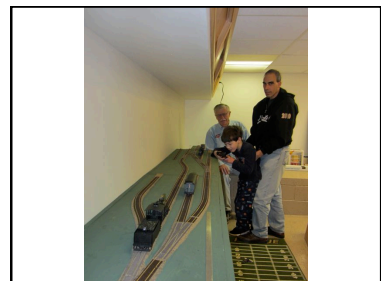
Ballast Track

- James glues down ballast around tracks
- Most of the family tried their hand
- The scenes became quite realistic
- It's art, 3-D art and done at low cost
- You can purchase materials or collect them



Operations

- We've all tried doing our thing
- The latest is a portable On30 feeder line
- We call it the Thunderlake and OutaSite RR
- The T&O Railroad starts in Three Lakes and works its way to the OutaSite Mountains
- Thomas is running the trains





Grand-kid Benefits

- Woodwork fundamentals and safety
- Electrical concepts and safety
- Structures and strengths of materials
- Planning and achieving objectives
- Use of limited time and resources
- Teamwork and joy of accomplishment



Some Basics


Choosing Your First Train Set

A model train set is a hobby item that can provide lasting satisfaction over time. A model train set has the ability to grow over the years and provide endless hours of entertainment for the entire family.




Age Before Beauty

- Choice of a model train:
 - A young child does not need as elaborate a train as a teenager or adult.
 - Children work better with larger scale trains and are easier for them to handle.
 - Most trains require electricity and younger children should be supervised.
 - Battery operated trains should be considered for children under six years of age unless supervised by an adult.



Youthful?


- Consider train sets with few delicate parts to reduce breakage due to mishandling and rough play.
- Keep it simple so they can enjoy the experience.
- Children may play to rough for scenery details.
- A simple circular or oval train track with a tunnel, train station, people, cars, and the train are plenty.
- Passenger train sets might have limited entertainment.
- Freight trains with operating accessories offer more stimulation.



Size / Gauge


- Model trains are obviously scaled down replicas of the real thing. The main model train scales and their minimum turning radius's are:

– O scale 1:48	– Minimum Radius 24 inches
– S scale 1:64	– Minimum Radius 22.5 inches
– HO scale 1:87	– Minimum Radius 15 inches
– N scale 1:160	– Minimum Radius 7.5 inches
– Z scale 1:220	– Minimum Radius 5.75 inches



Space the Final Frontier

- How much space is enough?
 - Determining which scale is best is a matter of taste. The issues that dictate space requirements are:
 - Willingness to give up laundry space in the basement.
 - Size or length of locomotives and cars.
 - Longer locomotives require larger radius for turning.
 - Most manufacturers indicate minimum radius for their locomotives.
 - Track plan? Many fit on a 4 x 8 ft. sheet of plywood.



Dealers & Brands

- Consider when purchasing your first train set.

— Assurance

- Purchase your set from an authorized dealer that stands behind the product their selling. This also includes the manufacturer.

— Alternatives

- Steel track has a tendency to corrode over time and will require more maintenance. Nickel-silver will not.



Wheels & Control

- Most freight and passenger cars now come with metal wheels already installed.
- Metal wheels provide better tracking when rolling through turnouts, causing fewer derailments.
- Plastic wheels leave an oily residue on the track.
- Better quality train sets come with locomotives equipped with digital command control (DCC) or have the capability to be upgraded easily.



Power Supplies

- Some higher-end sets from Bachmann, Athearn and Atlas include a larger, better power supply.
- Lionel includes a transformer that offers bell and whistle sound control on even its most basic sets.
- Better power supplies provide reliable operation for years and can support larger layouts.
- With conventional control a power supply still only runs one train at a time.



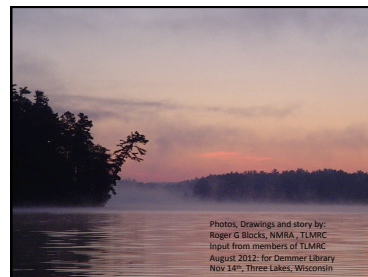
Why Buy A Train Set

- Challenge a child to use their imagination.
- Challenge a child to use their manual dexterities.
- Teaches family members aspects of layout design and construction.
- Provides family members a sense of accomplishment.
- Stimulates interaction, communications and bond among family.
- Teach how trains impact our lives.
 - Transportation Logistics (model on the railroad):
 - Raw materials for manufacturing.
 - Grains and other farm products that support our food chain.
 - Natural resources that support our country's energy sources.
 - Heavy equipment and machinery to and from factory's.
- Provides a lifetime of enjoyment for the entire family.



Summary

- Travel
- History
- Good clean fun
- All the basic skills
- Education will continue
- Togetherness and a widened group of friends



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