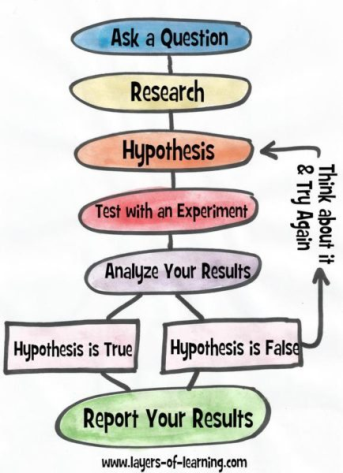
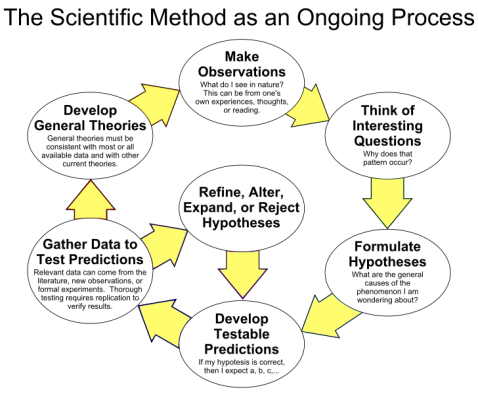
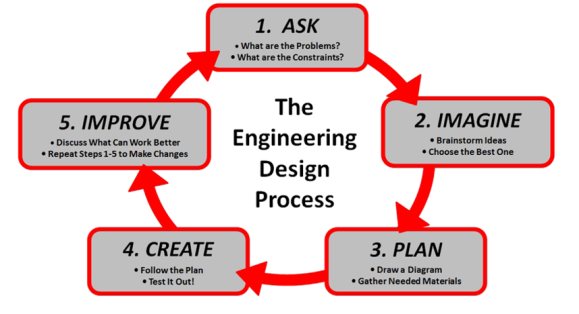
|  |  |  |  |
| --- | --- | --- | --- |
| Tuesday 2 / 3.5 | Wednesday 3 / 4 | Thursday 8 hr | Friday 2 / 3 |
| Name Tags  Introductions \*carpooling  Notebooks \*youtube examples: [example 1](https://youtu.be/2d-8_D7t7_E) [exam](https://youtu.be/H6A1VB99eRo)  [ple 2](https://youtu.be/H6A1VB99eRo)  Pyramid challenge  Keva builds  Cardboard Building w/ makedo  Pool noodle builds  Marble Run  Homework[: print Edison pages](https://meetedison.com/edmat/) | Balloon rockets \*Straw Builds \*soda straw rockets  Scratch Coding  Makey-Makey \* youtube videos: [video 1](https://youtu.be/-X3hb__YynM) [video 2](https://youtu.be/rfQqh7iCcOU) [Video 3](https://youtu.be/Cks7jspJQGs)  [Lesson plans](https://makeymakey.com/lessons/)  [Lesson plans 2](https://www.thetechieteacher.net/2017/06/academic-ways-to-use-makey-makey-in.html)  [More stuff](https://labz.makeymakey.com/)  [And more](https://labz.makeymakey.com/remixes)  [Apps to pair](https://labz.makeymakey.com/d/)  [How to set up makey](https://youtu.be/NzbjPNYbATU)  Makey Piano: [Video](https://youtu.be/NzbjPNYbATU) [Website](https://makeymakey.com/piano/)  Alka Seltzer Rockets  Water Rockets  Zoomy Microscopes  Catapults  HoverBoards  Paper circuits  Pipe cleaner build  [Survey for us.](https://goo.gl/forms/QfjohFoBU9sq5xAQ2)  [(Optional and anonymous)](https://goo.gl/forms/QfjohFoBU9sq5xAQ2) | ReUseum All Day  **3131 W Chinden Blvd**    208-375-7507  McVey  208-484-3290  Obert  208-860-9249  [Survey for us.](https://goo.gl/forms/QfjohFoBU9sq5xAQ2)  [(Optional and anonymous)](https://goo.gl/forms/QfjohFoBU9sq5xAQ2) | Butane Bubble Fire  HoverBoard  Rube Goldberg  Edison Robots  3D Printing  Slime  Junk Boats  Take the Survey!!  **(**[**https://idahostem.force.com/gms/**](https://idahostem.force.com/gms/)**).**  [Survey for us.](https://goo.gl/forms/QfjohFoBU9sq5xAQ2)  [(Optional and anonymous)](https://goo.gl/forms/QfjohFoBU9sq5xAQ2) |

**TV iStem Resources:**

* [**TVistem.weebly.com**](http://tvistem.weebly.com)
* [**Photos and resources**](https://drive.google.com/drive/folders/1WhRdWshnc4dgYRMDIe3deXR4SOXJBlQ0)

### Tuesday Morning



#### [Pocket Notebooks YouTube](https://www.youtube.com/watch?v=H6A1VB99eRo&feature=youtu.be)

* + Title
  + Graphic Page - Scientific Method
  + Table of Contents
  + Each page thereafter. (Heading. and in the upper right corner page # and date)

#### Pyramid Challenge

* + Supplies:
    - 6 Cups
    - String
  + Build a pyramid with only the string and rubber band. Your hands may not touch the cups. Next round: Only one hand per person. Round 3: All but one person Blindfolded, one hand and use and non-dominant hand.

#### Keva Builds

##### Challenge 1:

* + - How far out can you build a tower with the least amount of planks?
    - Work time
    - 1 minute to go steal others ideas and see if they are valuable
    - Consider: What is successful, what is not working for others.
    - At the end
      * Gallery Walk: Using notebooks. Record: What ideas are successful. What would you steal. (All warm feedback)
    - Curriculum ties
      * Fulcrums
      * Levers
      * Math Measurements: Measure your own and two more (Metric and standard)

##### Challenge 2:

* + - Build the tallest tower you can that will withstand an earthquake.
      * Have students consider the base and complete a trial to start.
      * Count planks. Observe Bases. Connection to prisms (Triangles and rectangles)
      * Curriculum ties: Weather, Natural Disasters, Safety in building, Choosing where you live. (Flood plains, Hillsides sliding)

#### Keva Curriculum Ideas

* + - [KEVA Structures 200 Plank Set 34.99 (Current Price as of 6/26)](https://www.amazon.com/KEVA-Structures-200-Plank-Set/dp/B004P5PD9O/ref=sr_1_3?ie=UTF8&qid=1530040421&sr=8-3&keywords=keva+planks+200)
    - Off Brand ([BzrkAdventures](https://www.amazon.com/BzrkAdventures/b/ref=bl_dp_s_web_13561514011?ie=UTF8&node=13561514011&field-lbr_brands_browse-bin=BzrkAdventures) Maple Wooden Planks - Made in USA - 1000 Piece Set for 220.00)
      * We compared these to Keva. Keva is Pine - Bzrk is Maple. Equal to shape and size of Keva. Could be mixed.
    - [Brainbuilders](https://www.amazon.com/MindWare-66009-KEVA-Brain-Builders/dp/B00IECWX5G/ref=sr_1_1_sspa?ie=UTF8&qid=1530040421&sr=8-1-spons&keywords=keva+planks+200&psc=1) 
      * [Challenge Cards](https://drive.google.com/drive/folders/1ZUANYevdr5Qg2add02vaB_zEhr0qvmO2?usp=sharing)
    - Ozobot - Build a Maze
      * Problem Solving, Coding, Bridges, Patterns
    - Weight Challenge with Bridges.
      * Structure, design, engineering
      * Literature ties. (Build chairs for 3 little bears)
      * Weight Conversions
    - Introduce other tools. (String)
    - Harry
      * Catapults: Get Harry over the water
      * Harry in a flood
      * Harry needs steps to be rescued
      * Maze make a map using a magnet to get Harry to school
        + Tape a magnet to a car then use a second magnet to push Harry and his car to different places. (Home, Store)
        + (6 pack magnets at Lakeshore learning)
    - Marble Runs
    - Chain Reactions: Dominos
    - Ramps
      * Use different weights to see what rolls the fastest
      * Different wheels to see what rolls best

### Tuesday Afternoon

* [Community Grants Portal](https://idahostem.force.com/gms/))
  + For Survey on Friday

#### [Pool Noodle Builds](https://drive.google.com/open?id=1b-0wVHtAjmcChEtbWrqaAryfVsqnnwyB)

* + Pool noodles (1.00 at the dollar store in the summer)
  + Toothpicks to attach noodles together
  + Cut into short pieces
    - Moleculles
    - Art projects
    - Diagram a bug
      * Stick together with toothpicks and then label the peices of the “bug”
      * Butterflies
    - Decimals and Fractions
    - Diagram Sentences.
    - Reconstruct and talk about bullying and how if you cut something it never goes back together.
    - Mad Libs. (Words on each noodle and construct meaning)
    - Dual Language connection - parts of the flower in Spanish
    - Roller Coasters
      * Purpose: Design a roller coaster for Stability, Safety, Fun Ride

#### Marble Run

* + Supplies
    - Pool Noodles
    - All other recyclable materials
    - Tape
  + Purpose: How long and far can you get a marble to go
* Marble runs versus Rollercoaster
  + Marble Run - Longer distance and more considerations
  + Rollercoaster - Consider slow down speed up.

#### [Make Do](https://www.make.do/)

* + Supplies:
    - [Make Do Tool Kits](https://www.amazon.com/Makedo-Cardboard-Construction-Toolkit-Classroom/dp/B01N4S52UQ)
    - [Expansion Pack](https://www.amazon.com/dp/B072N5RDYG/ref=sspa_dk_detail_1?psc=1&pd_rd_i=B072N5RDYG&pf_rd_m=ATVPDKIKX0DER&pf_rd_p=1713835751726239774&pf_rd_r=XC7D3NP4WPHQG5DBK1ZQ&pd_rd_wg=96CNv&pf_rd_s=desktop-dp-sims&pf_rd_t=40701&pd_rd_w=9mtZE&pf_rd_i=desktop-dp-sims&pd_rd_r=a3431afd-7987-11e8-a372-a39805c6653b) Short Scrus
    - [XL Scru Expansion Pack](https://www.amazon.com/Makedo-Cardboard-Construction-Expansion-Classroom/dp/B071GRFKXY/ref=pd_sim_21_4?_encoding=UTF8&pd_rd_i=B071GRFKXY&pd_rd_r=a20a3408-798c-11e8-aa12-e9bed29a5105&pd_rd_w=7uc0S&pd_rd_wg=swZva&pf_rd_i=desktop-dp-sims&pf_rd_m=ATVPDKIKX0DER&pf_rd_p=7967298517161621930&pf_rd_r=TKP261DFKY9TXBZMANC8&pf_rd_s=desktop-dp-sims&pf_rd_t=40701&psc=1&refRID=TKP261DFKY9TXBZMANC8)
    - Cardboard and recyclable items
  + [Cheaper version](https://www.amazon.com/Mr-McGroovys-Box-Rivets-Half/dp/B00FD5RNJS/ref=pd_sim_21_12?_encoding=UTF8&pd_rd_i=B00FD5RNJS&pd_rd_r=eccd4293-798b-11e8-97cb-05508e51e6b0&pd_rd_w=axtD9&pd_rd_wg=lOmTF&pf_rd_i=desktop-dp-sims&pf_rd_m=ATVPDKIKX0DER&pf_rd_p=7967298517161621930&pf_rd_r=FCBD67NWXG1SDRSMFJG2&pf_rd_s=desktop-dp-sims&pf_rd_t=40701&psc=1&refRID=FCBD67NWXG1SDRSMFJG2) (But no tools)
  + What can you do:
    - Mixing materials
    - Structures
    - Bridges
    - Forgiving - you can change on the fly
    - Talk about reusing
    - Imagination
    - Have students plan and then bring in recyclables

### Wednesday

#### [Scratch Coding](https://scratch.mit.edu/)

* + [DK Workbooks: Coding with Scratch Workbook](https://www.amazon.com/gp/product/1465443924?ie=UTF8&camp=9325&creativeASIN=1465443924&linkCode=as2&tag=d0124-20)
  + Curriculum Ties
    - Math (positive negative integers, X and Y Plane)

#### Makey Makey

* + Supplies:
    - [Play Dough Party Packs](https://www.amazon.com/Play-Doh-Party-Bag-Dough-Count/dp/B0037710BG)
    - [Makey Invention Kit](https://www.amazon.com/Makey-Invention-Kit-Everyone/dp/B008SFLEPE)
    - Optional Fruits. (Have students determine which work best/ conductors)
  + [Piano](https://makeymakey.com/piano/)
  + [Labz (All the things)](https://labz.makeymakey.com/d/)
    - Inquire about conductors
  + Makerspaces
    - Unbound, Meridian, 713 N. Main Street, Meridian , ID 83642
  + Curriculum Connections
    - Atoms
    - Conductivity
    - Math
    - Make Playdough conductive or non-conductive and test
    - [Labz](https://labz.makeymakey.com/)
  + Other Makey Makey Type Options
    - [Arduino](https://www.arduino.cc/)
    - [RedBoard](https://learn.sparkfun.com/tutorials/redboard-hookup-guide)
    - [Raspberry Pi](https://www.raspberrypi.org/)
* Coding
  + [Blockly](https://blockly-games.appspot.com/)
  + [Tynker](https://www.tynker.com/)
  + Code.org ($$$$)

#### lka -Seltzer Rockets

* + Supplies:
    - Alka-Seltzer
    - Film Canister
    - Science Notebook and a table to record data
  + Curriculum Connections
    - Variables
    - Constants
    - What is happening. (On the surface)

#### Water Rockets

#### [NASA Rockets Educator Guide](https://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Rockets.html)

* + [DIY Launcher](https://www.nasa.gov/pdf/153405main_Rockets_Water_Rocket_Launcher.pdf)
  + [Water Rocket Directions](https://www.nasa.gov/audience/foreducators/topnav/materials/listbytype/Water_Rocket_Construction.html)
  + [Aquapod - On Sale! 46.95](https://www.foxandgrapesco.com/pt/aquapod/)
  + 1 Hour per day, 2 Week Project
    - Places / types to purchase
      * [Delta](https://www.schoolspecialty.com/delta-education-single-solid-aluminum-bottle-rocket-launcher-590202?gclid=CjwKCAjw68zZBRAnEiwACw0eYZGuZi6cY2bSocqt6ANsia13qYsADDu8xlcVZe2DqjUsb1WP8U60qRoCel0QAvD_BwE)
      * [Etsy DIY Kit](https://www.etsy.com/listing/526146815/rocket-launcher-water-and-soda-bottles?gpla=1&gao=1&&utm_source=google&utm_medium=cpc&utm_campaign=shopping_us_c-toys_and_games-sports_and_outdoor_games-other&utm_custom1=0e56e895-d967-4a20-9c09-2374ffd4affb&gclid=CjwKCAjw68zZBRAnEiwACw0eYW_7MrtciS3sdDvEExzkxXyCVbnbRvMevi_63PtZR3CQ6I9KasFHtRoCMTUQAvD_BwE)
      * [Belleville](https://bellevillehobby.com/product/quest-water-rocket-complete-launch-system/?gclid=CjwKCAjw68zZBRAnEiwACw0eYVOdCH_dLK9c7flIGdCaXv4iChsELrLFCai-Q3jvB1ge8PLKRPt0dxoC5yIQAvD_BwE)
  + Curriculum Connection

#### [Mini Economy resource](http://www.unm.edu/~jbrink/365/Documents/ClassroomEconomyBooklet.pdf)

#### Zoomy Microscopes

#### Catapults

* + Supplies:
    - 7 Popsicle Sticks
    - 4 Rubber Bands
    - Small Lid or a spoon
  + Curriculum
    - History - What launches. What would you choose and why.

#### Popsicle Stick Chain Reaction

* + [Cobra](https://www.youtube.com/watch?v=gIwZ9d361A8)
  + 7 Ways to make [Ninja Throwing Stars](https://www.youtube.com/watch?v=GQyGDKklVPU) (Butterfly bomb)
  + [Insane Stick Bomb](https://youtu.be/ujDY9vwnne4)
  + Curriculum
    - Patterns
    - Force in Motion

#### Hoverboard

* + Small table top Hoverboard supplies:
    - Balloon
    - Small water bottle cap
    - CD/DVD
  + Large Hoverboard Supplies
    - Board
    - Duct Tape
    - Bolts
    - Pool Noodles or foam insulation
  + Curriculum Connection:
    - Properties of gas
* What will you take back to your classroom
  + Alka -Seltzer Rockets
  + Popsicle sticks
  + Scratch Coding - problem solving

#### Pipe Cleaner Build

* + Supplies
    - 10 Pipe cleaners (or more or less) [Might want to call them craft wire]
    - Build the tallest free standing tower in 5 minutes

#### [Thursday - Reuseum](https://reuseum.com/)

3145 W Chinden Blvd, Garden City, Idaho 83714

websitel: educate.reuseum.org

<http://educate.reuseum.org/workshops/>

Steve Rodoletz: Board Member, Executive Director Direct 208-342-4776 Store 208-375-7507 email: [steverodoletz@educate.reuseum.org](mailto:steverodoletz@educate.reuseum.org)

Glen Martin: 208-375-7507 email glen@reuseum.com

* Important Information
  + [CC@educate.reuseum.org](mailto:CC@educate.reuseum.org)
  + Look on [Instructables](https://www.instructables.com/) for CD’s and other materials how to.
  + Do you have students who don’t have computers?
    - Kids get to take it home for their use. (Low-Income and Struggling)
* Bristlebots
* Junk Drawer Robots
* Fidget Spinners
* Doorknockers

### Friday

#### Light yourself on fire

* + Supplies
    - Butane
    - Dawn Dish soap
    - Water
    - Bucket
    - Fire Extinguisher
  + Properties of Fire
  + Properties of Gas
    - Oxygen
    - Pressure and Density
    - Gas has different properties
    - Invite the Fire Department to talk about fire safety

#### Hovercraft

* + Supplies
    - Heavy Plastic
    - Leaf Blower
    - Duct Tape
    - Plywood
    - Bolts
    - Coffee Can Lid
    - Foam Pipe Insulation
    - Tools to cut and put it together
    - [Instructions](https://www.popularmechanics.com/technology/gadgets/a13389/diy-hoverboard-made-of-leaf-blowers/)
      * A[dam Savage instructions (](https://www.wired.com/2012/05/ff_hovercraft/)Don’t use the Chair)
  + Properties of Air Unit
    - Rockets
    - Airplanes
    - Hoverboard

#### Paper Circuits

* + Supplies
    - Battery CR2032 (Check Harbor Freight)
    - Copper Tape. [Amazon Price](https://www.amazon.com/dp/B078NP5QTZ/ref=sspa_dk_detail_0?psc=1&pd_rd_i=B078NP5QTZ&pf_rd_m=ATVPDKIKX0DER&pf_rd_p=1713835751726239774&pf_rd_r=Z0RNARRAM1BH6JG6HERB&pd_rd_wg=z1bZP&pf_rd_s=desktop-dp-sims&pf_rd_t=40701&pd_rd_w=JHrW1&pf_rd_i=desktop-dp-sims&pd_rd_r=9dea51a6-7bbb-11e8-ae7d-27beeed8d987)
    - Notecard
  + Curriculum
    - Amps and Volts
    - Relays
    - Insulators
    - Poles (Positive and Negative)
    - Map of a town and light up certain buildings.
  + Snap Circuits will extend this lesson even further

#### Edison Robots

* + Supplies
    - [Edison Robot](https://meetedison.com/)
    - [Mat](https://meetedison.com/edmat/)
      * When printing make sure you uncheck “Fit to Page” to get it to print large size
      * Fed Ex Printing - Mat is 18
      * Print is 60
      * Check with HP Friends, Family, Student Parents for HP Printing (Free Donation)
      * [Buy Mats, Laminated (Double-side)](https://www.wiltronics.com.au/MeetEdison/edison-edmat-activity-mats/)
  + Other
    - [Activity Books](https://meetedison.com/activity-books/)
    - [Free Lesson Plans](https://meetedison.com/robotics-lesson-plans/)

#### Slime

* + Supplies
    - Borax
    - Glue
    - Water
    - Food Coloring
  + [Slime Recipes](http://www.elmers.com/slime) and Curriculum connections on Elmers
  + [Thermomagnetic Slime](https://leftbraincraftbrain.com/heat-sensitive-color-changing-slime/)
    - Heat sensitive to change colors
    - [Thermochromic Pigment](https://www.amazon.com/BLUE-Thermochromic-Pigment-10g/dp/B00SZ7X99Y/ref=as_li_ss_tl?m=A1MKEESZAGI30T&s=merchant-items&ie=UTF8&qid=1490638361&sr=1-1&keywords=thermochromic+pigment&linkCode=sl1&tag=lefbracrabra-20&linkId=cf026136b0e99278f732868ae4857e47)
  + Glow in the Dark Acrylic paint from Walmart. - Add a few drops to the mixture to make it glow in the dark

#### Junk Boats

* + Weighted Boats.
  + Transportation
  + Colonization
  + Mayflower

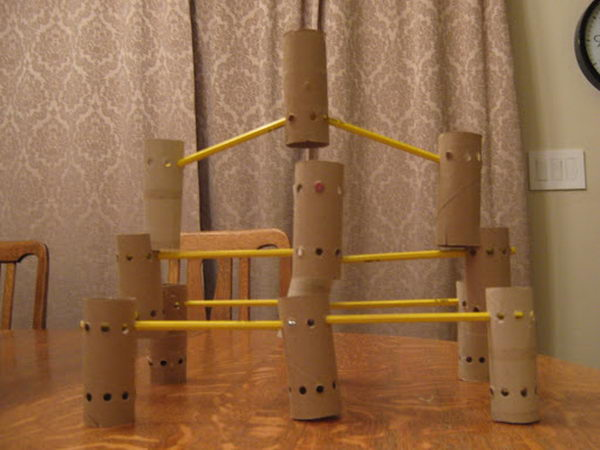
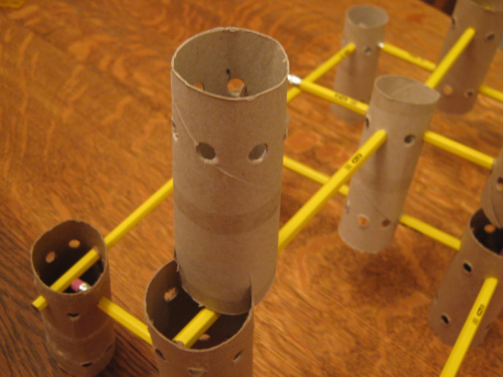
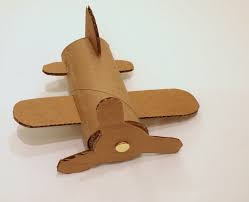
#### Rube Goldberg

* + [OK Go Music Video](https://www.youtube.com/watch?v=qybUFnY7Y8w)
    - Failure and keep trying
    - Chain Reactions

### Not Demonstrated, Good Activities for Scientific Method

* [Saving Sam (or Fred)](https://www.youtube.com/watch?v=L26KZ99xfT0) You Tube
  + [Lesson Plan, Purdue University](https://extension.purdue.edu/4h/documents/volunteer%20resources/science%20made%20easy/save%20fred.pdf)
* Dr Xargle
* Worm Observations
* Sensory Materials
  + <http://parentingchaos.com/diy-kinetic-sand/>

Tuber builders

Cardboard builders

