MIND TREKKERS
Happy Feet Lesson Plan

Amount of time Demo takes: 3:00-5:00min
Materials:
1. 4-5 single shoes
2. 4 layout boards
3. Activity cards
4. Design Requirement Cards

Set up instructions:
1. Place the layout boards on the table.
2. Set the activity cards, design requirement cards, and shoes out in separate piles in the middle of the table.

SAFETY!
1. Safe Demo

Lesson’s big idea:
● Think like an engineer with design processing.

Instructional Procedure:
1. Have the kids take each shoe and discuss what it is used for and what was thought about when designing it.
2. Instruct them to place a shoe on each board and use the cards to fill in the activities and design requirements for each.
3. When they are done discuss with them why they arranged everything the way they did.

Assessment
Sample questions you can ask:
1. Why is “Keeps feet dry” Not a requirement for sandals?
2. Why wasn’t easy to slip on a requirement for gym shoes?
3. Would it be practical for slippers to be made with laces?
4. How does this activity apply to manufacturing in general?

Conclusion:
Big Idea: There is more engineering based thinking and design in manufacturing products than most people realize.

Clean Up
Clean up between demonstrations if needed. When completely finished gather all materials listed for this demonstration and make sure everything is accounted for. If something was used up, broken or damaged. Let someone know so it can get replaced or fixed.

References:
National Standards:
K-4 Content Standard B: Physical Science, Light, heat, electricity and magnetism
K-4 Content Standard E: Abilities of technological design
5-8 Content Standard B: Physical Science, Transfer of energy, Motions and forces
5-8 Content Standard E: Abilities of technological design
9-12 Content Standard B: Physical Science, Motions and forces, Interactions of energy and matter
9-12 Content Standard E: Abilities of technological design
K-12 Content Standard A: Science as inquiry