Theme Park Redesign Project Guide

intel. FUTURE SKILLS

PROJECT OVERVIEW:

Create a new theme park area or ride that is safer, fun, and overall, more enjoyable for people to go to.

Project Intro Video:
Theme Park Redesign

Inspirational Video:
Epic Toothpick Roller Coaster

PROJECT CATEGORY:
Design

DIFFICULTY LEVEL:
Intermediate

TIME RANGE:
60 - 90 minutes

ESSENTIAL SKILLS/ MINDSETS THAT YOU MAY LEARN:
Design Thinking

Iteration

Prototyping

Simple Machines

Collaboration

Communication

Empathy

TOOLS AND MATERIALS:

- Craft materials: straws, bamboo skewers, & brass fasteners
- Scissors
- Tape, or stick glue
- String or rubber bands
- Cards, colored paper, and markers
- Optional: DC motor and batteries

AT HOME SUBSTITUTIONS:

- This activity can be done at home with common household materials. However, if you'd like to motorize a ride or part of your theme park then try to incorporate scavenged motors, switches or LEDs to make your creation even more fun!

MATERIAL PURCHASE LINK:
http://tiny.cc/Intelbuylist

Project Steps
Dream It!

Think about theme parks. Why do people go to them? For the fun rides or a family get away? Parks are fun but they are also crowded. Germs can spread easily. Not all rides are as fun as they could be. Lines are sometimes long and food can be expensive.

For all the fun, theme parks still have lots of problems. So get creative and get solving!

1 To start, watch the Inspire-to and How-to videos to unpack the challenge and learn more about theme parks. [:07]

2 Decide what problem you would like to solve through a redesign. Germs? Lines? More fun? Better rides? You make the call. [:03]

Draw It!

3 Examine the available materials for inspiration. [:05]

4 Sketch a map of your new theme park and label the problem areas that you'd like to redesign. [:05]

Build It!

5 Gather your supplies and start to build your redesigned theme park prototype. [:10]

6 Test, troubleshoot, and iterate to make your theme park redesign the best that you can. [:15]

7 Decorate, add in more theme components and get ready to show off your creation. [:10]

Share It!

8 Show off your theme park redesign and get some feedback. What is great and what could be better? [:05]

Expand It!

Think about this: If there were no theme parks in the world what would you build from scratch?

- Would there be individual rides or something else?
- Could you rent a section of the park for your private group or family?
- Would your theme park have multiple levels?
- Think big and create something super fun!

Or, dig into the science behind theme park rides. How Roller Coasters work:
https://science.howstuffworks.com/engineering/structural/roller-coaster3.htm

THINK ABOUT IT:
What problem do you need to solve in your new theme park?

- Will it be an area of the park?
- A specific ride that could be more fun? Safer?
- A shorter or more fun line?
- Or a fun way to sanitize rides, or even the guests, during use.

DASH OF DESIGN:
Design thinking is a system that helps solve problems, starting with empathy (looking at the problem from the user's point of view). Watch our video to learn how you can use empathy for a better redesign.

PRO TIPS:
Design thinking can be used for more than just creating physical things. Try using it to help create new systems too.

- Focusing on park safety? Try to create a new way to line people up. Or an app or ticketing system that keeps density down using your phone GPS. What about a theme park area that rewards you for washing your hands?
- Draw a map and add labels, arrows, or light it up with LED to show traffic flow.

Are you focusing on building a new ride -a roller coaster, spinning ride of doom, or a fun Ferris wheel?

- If your new park ride needs to move, try putting a bamboo skewer inside a drinking straw to make a nice spinning axle. –add rubber bands or DC motors to make it powered.

HELPFUL RESOURCES
- How to reopen theme parks amid COVID-19:
  https://blooloop.com/features/theme-parks-covid-19-changes/
- Example motor powered amusement park ride:
  https://www.youtube.com/watch?v=aIxoMv2i_8M
- Rubber band powered card (ideas to power your theme park ride):
  https://kitchenpantryscientist.com/tag/rubber-band-car/

NEED MORE HELP AND INFORMATION?
Contact us at: **intelfutureskills@intel.com**