

Elementary Explorations Projects

First Grade

Unit ~ 4Cs

- Minesweeper (Communication) - Find the ONLY path through the maze. The direction giver is the only team member that may communicate (according to teacher instructions).
- Shrinking Island (Collaboration) - OH NO! You and your group are stranded on an island that is getting smaller every three minutes! Find a way that allows all members of your group to stand on the island for at least 10 seconds.
- Breakout Edu (Collaboration) - Let's all work together to solve the riddle and open the Breakout EDU boxes! It will take all of us collaborating and communicating together!

Unit ~ Makerspace: Fairytale Engineering

- Little Red Riding Hood - Send Grandma a "basket of goodies without going through the deep dark forest
- Humpty Dumpty – Build a fall protection surface to place below Humpty Dumpty so he is able to survive a fall of 100cm. 200 cm? 300 cm?
- Curious George - Build a PAPER wall that is able to withstand a toy car collision!
- Cinderella - Build a wind-powered coach to help Cinderella get to the ball.
- Goldilocks & the Three Bears - Make a bed for Goldilocks that will support her for at least 10 seconds.
- Three Little Pigs - Use your assigned materials to build a home strong enough to withstand a blow from wolf (fan).
- Cinderella - Make a plan to design, build, and demonstrate the power of your wand

Unit ~ Design Thinking: Jam Session

- Explore different materials for musical instruments
- Experiment with different digital/electronic tools for making music.
- Design a working electric or acoustic instrument that could play in a real band.
- Build an instrument that is:
 - playable
 - mobile
 - somewhat pleasant to listen to,
 - amazing & cool
- Create a music video with your group, using the instruments you created

Unit ~ Movie Production

- Plan, create and share a movie using the story arc in Puppet Pals HD

Second Grade

Unit ~ 4Cs

- Minesweeper (Communication) - Find the ONLY path through the maze. The direction giver is the only team member that may communicate (according to teacher instructions).
- Human Knot (Collaboration) - OH NO! You and your group are in an awkward situation! You are holding another person's hand, but don't know whose! Work together to untangle your human knot WITHOUT letting go of that hand you are holding!
- Breakout Edu (Collaboration) - Let's all work together to solve the riddle and open the Breakout EDU boxes! It will take all of us collaborating and communicating together!

Unit ~ Makerspace: Structures

- Magnetic Lego Vehicles – Move your Lego car without touching it
- Sphero Chariots – Build a chariot that can be pulled by the Sphero.
- Bridge Building with K'NEX - Build a bridge using K'NEX that will hold the most number of books possible.

Unit ~ Design Thinking: A Game for your Brain

- Plan, create and share your own board game

Unit ~ Movie Production

- Plan, create and share a movie using the story arc in Toontastic 3D

Third Grade

Unit ~ 4Cs

- Human Knot (Collaboration) - OH NO! You and your group are in an awkward situation! You are holding another person's hand, but don't know whose! Work together to untangle your human knot WITHOUT letting go of that hand you are holding!
- No-Hands Cup Stacking (Collaboration) – Stack the cups into a beautiful pyramid! The Ancient Egyptians would be so jealous to know that you are able to build a pyramid with NO HANDS.
- Breakout Edu (Collaboration) - Let's all work together to solve the riddle and open the Breakout EDU boxes! It will take all of us collaborating and communicating together!

Unit ~ Makerspace: Up, Up and Away

- Paper Airplanes - Design and create a paper airplane that can travel the farthest distance.
- Balloon Joust – Test your accuracy and precision. Attach the skewer to the balloon and launch it towards the target
- Hot Air Balloons – Use the provided materials to design and build a hot air balloon. It must stay in the air for 25 seconds. Spend wisely... you only have a specific amount of money. (\$15)
- Water Bottle Rockets - Design and create a rocket to launch into the sky! Be creative. The sky's the limit!

Unit ~ Design Thinking: What a Character

- Create a “Fakebook” profile for your character. Must include: Character name, 5 posts (name, write something), create shortcut on Google Chrome, profile picture (download & upload) and facts about your character (profile)

DESIGN THINKING CHALLENGE: ROLL WITH IT!

1. TOY

Design a brand new toy for your character.
OPTION: Give the toy one magical power that only the character will know about.



2. CLOTHING

Design a new item of clothing that your character will love and that will help the character in some way.
OPTION: Use electronics to make the clothing light up or display sounds.

3. HELPING OTHERS

Design a gadget that will help the character to help others.
OPTION: Make the gadget pocket sized so it's portable.

4. COVER CREATION

Design an item that will change the character's life and become the feature of a whole new story.
OPTION: Give the new story a title and describe it.

5. EDIBLE INCREDIBLE

Design something new for your character that he or she can also eat.
OPTION: A grocery store wants to put your item on its shelves. Create the packaging and describe what section of the store it would go in.

6. WILD CARD!

Choose 1-5. Have Fun!

Unit ~ Movie Production

- Plan, create and share a movie trailer using iMovie

Fourth Grade

Unit ~ 4Cs

- No-Hands Cup Stacking (Collaboration) – Stack the cups into a beautiful pyramid! The Ancient Egyptians would be so jealous to know that you are able to build a pyramid with NO HANDS.
- Famous Pairs (Communication) - Who are you? First figure that out, and then find your other half. The two of you are a dynamic duo! Ask ONLY one yes/no question per person.
- Breakout Edu (Collaboration) - Let's all work together to solve the riddle and open the Breakout EDU boxes! It will take all of us collaborating and communicating together!

Unit ~ Makerspace: Super Dooper Looper

- Plan a simple structure for a roller coaster
- Using the paper roller coaster templates, create a paper roller coaster framework and track that allows a marble to roll without falling off

Unit ~ Design Thinking: Short Circuits

- Plan and create a video game using the video game storyboard template, Game Lab and Makey Makey

Unit ~ Movie Production

- Plan, create and share a movie using Stop Motion Video

Fifth Grade

Unit ~ 4Cs

- Famous Pairs (Communication) - Who are you? First figure that out, and then find your other half. The two of you are a dynamic duo! Ask ONLY one yes/no question per person.
- Index Card Towers (Collaboration) – Build a tower out of index cards in only 10 minutes
- Breakout Edu (Collaboration) - Let's all work together to solve the riddle and open the Breakout EDU boxes! It will take all of us collaborating and communicating together!

Unit ~ Makerspace: Pinball Wizard

- Plan, design and build a pinball machine using the Launch Cycle

Unit ~ Design Thinking: Sharktastic

- Plan, design, and build a prototype of something that would help you or someone else solve a real life problem in school.
- Share designs during Shark Tank

Unit ~ Movie Production

- Plan, create and share a movie script using iMovie