

BREAKOUT ROOM #1

Make a Parachute

Task: Modify a STEM Activity for distance learning.

1st

Choose a “spokesperson” (This could be the person whose name is closest to the beginning of the alphabet.) This person’s job will be to report back to the large group.

2nd

Become familiar with the STEM Activity your group is assigned

3rd

Discuss with your group how you might revise the STEM Activity your group has been assigned. Be specific about the changes you need to make.

STEM Activity:

Make a Parachute

Link:

<https://www.sciencekids.co.nz/experiments/freefall.html>

Summary:

Learn about air resistance while making an awesome parachute. Design one that can fall slowly to the ground; make modifications as you go.

Materials:

plastic bags, scissors, string, small objects to act as a weight (like a small action figure)

Things to Consider

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- What is the best way to implement this activity?
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- What other considerations need to be addressed (Access to materials, age range, etc.)?

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BREAKOUT ROOM #2

Paper Chain STEM

Task: Modify a STEM Activity for distance learning.

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STEM Activity:

Paper Chain STEM

Link:

https://drive.google.com/file/d/1eip57IN7jY_NL07vumajE7ND3-tbvQor/view

Summary:

In a group, students work together to build the longest paper chain possible with the materials provided.

Materials:

construction paper, scissors, rules, making tape

Things to Consider

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- What is the best way to implement this activity?
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BREAKOUT ROOM #3

Making Music

Task: Modify a STEM Activity for distance learning.

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STEM Activity:

Making Music

Link:

<https://docs.google.com/document/d/1XISTBHsXan0LsNXt9PI54diF2CG8lzhA9hwlfRXGLzg/edit>

Summary:

Create an instrument to play. Use different materials to create different sounds.

Materials:

small and large rubber bands, jumbo craft sticks, shoe box, coffee cans, paper plates, dried beans

Things to Consider

- What is our objective in creating opportunities for students to explore STEM at home?
- What is the best way to implement this activity?
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BREAKOUT ROOM #4

Take it Slow

Task: Modify a STEM Activity for distance learning.

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3rd

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STEM Activity:

Take it Slow

Link:

https://docs.google.com/document/d/1WOUKpg4nYPvjnY39aSBBQoOcEWsfbwWJdGu0kV_krfY/edit

Summary:

Design ramps to make a toy car travel slow, slower, and slowest.

Materials:

toy car, cardboard, sandpaper, rubber shelf liner, playdough, yarn

Things to Consider

- What is our objective in creating opportunities for students to explore STEM at home?
- What is the best way to implement this activity?
- How will students engage with this activity? Virtually? Hands-on? Other?
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BREAKOUT ROOM #5

Lava Lamps

Task: Modify a STEM Activity for distance learning.

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STEM Activity:

Lava Lamps

Link:

<https://educationcloset.com/2017/09/01/steam-lava-lamps/>

Summary:

This is a do-it-yourself lava lamp activity that covers density, intermolecular, polarity, and gas.

Materials:

glass or plastic container, vegetable oil, water, funnel, food coloring, Alka-Seltzer tablets

Things to Consider

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- What is the best way to implement this activity?
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BREAKOUT ROOM #6

Ultimate Paper Airplane Competition

Task: Modify a STEM Activity for distance learning.

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STEM Activity:

Ultimate Paper Airplane Competition

Link:

<https://www.thethinkerbuilder.com/2016/05/flyin-to-end-of-year.html>

<https://drive.google.com/file/d/1I54aGEimSLC3EDh5d6OT0eRUesBcVQU9/view>

Summary:

Work in teams to build various airplanes. Observe the flight patterns to see which design can hit a bullseye, hang in the air, fly straight, and go the distance.

Materials:

paper, recording sheet, writing utensil

Things to Consider

- What is our objective in creating opportunities for students to explore STEM at home?
- What is the best way to implement this activity?
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BREAKOUT ROOM #7

Pencil Challenges

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STEM Activity:

Pencil Challenges

Link:

<https://jenniferfindley.com/stem-activities-with-pencils/>

Summary:

Explore many scientific concepts with various pencil challenges.

Materials:

number 2 pencils, clothespins, pipe cleaners, craft sticks, tape, clear jar, water

Things to Consider

- What is our objective in creating opportunities for students to explore STEM at home?
- What is the best way to implement this activity?
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BREAKOUT ROOM #8

Paper Plate Maze

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STEM Activity:

Paper Plate Maze

Link:

<https://raisinglifelonglearners.com/make-a-paper-plate-maze-stem-challenge/>

Summary:

Using household items, challenge yourself to make a marble maze. Follow the design process of brainstorming, blueprints, prototypes, testing, and making changes.

Materials:

paper plates, cardboard, straws, cotton balls, string, glue, scissors, marbles

Things to Consider

- What is our objective in creating opportunities for students to explore STEM at home?
- What is the best way to implement this activity?
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- How can we engage students in sharing their experience/findings/project/learning with the community?
- What other considerations need to be addressed (Access to materials, age range, etc.)?

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BREAKOUT ROOM #9

Bottle Flip Challenge

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Choose a “spokesperson” (This could be the person whose name is closest to the beginning of the alphabet.) This person’s job will be to report back to the large group.

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Become familiar with the STEM Activity your group is assigned

3rd

Discuss with your group how you might revise the STEM Activity your group has been assigned. Be specific about the changes you need to make.

STEM Activity:

Bottle Flip Challenge

Link:

<https://docs.google.com/document/d/1ZyhlkvE35zj2-ZvbXQxQLzSwIJYCzCqFtfo2YXFXhNM/edit>

Summary:

Flip a water bottle to make it land standing upright. Observe to learn what factors impact your success rate.

Materials:

empty water bottles, workbook

Things to Consider

- What is our objective in creating opportunities for students to explore STEM at home?
- What is the best way to implement this activity?
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BREAKOUT ROOM #10

Space Lander Mission

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STEM Activity:

Space Lander Mission

Link:

<https://www.jpl.nasa.gov/edu/teach/activity/touchdown/>

Summary:

Students engineer a lander to keep two “alien” marshmallows safe. They will learn about shock-absorptions, gravity, motion, and stability.

Materials:

cardboard, plastic cup, index cards, mini-marshmallows, rubber bands, straws, scissors, tape

Things to Consider

- What is our objective in creating opportunities for students to explore STEM at home?
- What is the best way to implement this activity?
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BREAKOUT ROOM #0

“Title of STEM Activity”

Task: Modify a STEM Activity for distance learning.

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2nd

Become familiar with the STEM Activity your group is assigned

3rd

Discuss with your group how you might revise the STEM Activity your group has been assigned. Be specific about the changes you need to make.

STEM Activity:

Title

Link:

if applicable

Summary:

Materials:

Things to Consider

- What is our objective in creating opportunities for students to explore STEM at home?
- What is the best way to implement this activity?
- How will students engage with this activity? Virtually? Hands-on? Other?
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