



Thank you for signing up to learn more about Destination Imagination (DI)! The five STEAM (science, technology, engineering, arts and mathematics) activities included in this download are based on our Instant Challenges. Our Instant Challenges are exclusive to our Destination Imagination Challenge Experience—an international creative problem-solving competition for kids and teens. Normally, our Instant Challenges include a teamwork component. However, given the current situation (please be sure to wash your hands and practice social distancing!), we understand and can sympathize with the many parents who are trying to work from home while keeping their kids entertained. It's not easy!

We have designed all five of these STEAM challenges without a teamwork component so that kids are able to do them on their own, if necessary. We have also included Scoring and Reflection sections in case family members have time to watch and be involved as they create their solutions.

Please feel free to modify the suggested materials lists based on what you have available. Changing the materials is also a great way to see how your kids can come up with different ways to solve the challenges. (Note: Instead of providing a materials list, you can also ask your kids to find their own materials to solve the challenge. This will extend the timeframe of the activity, which can be helpful for parents and guardians who are working from home right now!)

We hope you enjoy these and we encourage you to share this resource with other families who could use some new activities!

We would also love to see what your kids create! Upload photos or videos of their creative solutions to social media using the hashtag #InstantChallenge.

PAPER STRUCTURE



Note: Consider having your kids try this challenge for the first time using a paperback book. Then see if their structure is able to hold a hardback book. If not, have them rebuild their structure to see if it can hold the heavier book.

LEARNING OUTCOMES

Kids will utilize the innovation and design process, think creatively and critically, draw conclusions, and make inferences

CHALLENGE

Build a freestanding structure that is as tall as possible and can hold a book for at least 15 seconds.

MATERIALS

- 10 sheets of paper
- 4 mailing labels or 12 inches (31 cm) of masking tape
- 1 book
- 1 yardstick/meterstick (for measuring only)

TIME

8 minutes

SCORING

- A. 5 points (maximum 80 points) for each full inch of height of your structure
- B. 20 points if your structure is at least 12 inches tall
- C. 10 points if your structure can hold a book for at least 15 seconds
- D. Up to 20 points for the creativity of your structure

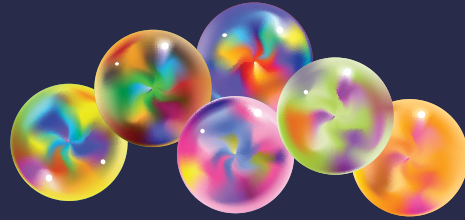
REFLECT ON WHAT YOU DID

- What was the most difficult part of this Challenge?
- What different ways did you think of to use the paper to make the structure taller?

EXTEND YOUR IDEAS

- Can you solve this challenge again using the materials in a different way?
- Can you build a structure that can hold 2 or more books?

DON'T LOSE YOUR MARBLES



Note: Try having your kids do this activity more than once using fewer materials or placing one of the bowls in a different position, such as on a chair or in a different room.

LEARNING OUTCOMES

Kids will utilize the innovation and design process, think creatively and critically, draw conclusions, and make inferences

CHALLENGE

Create a device that can transport marbles from one bowl to another. The bowls should be placed 10 feet (3 meters) away from each other. You may not touch the marbles when transporting them from one bowl to the other. Neither of the bowls may be moved or touched while solving the challenge.

MATERIALS

- 2 chenille stems (pipe cleaners)
- 3 straws, 1 sheet of paper
- 4 mailing labels or 8 inches (20 cm) of tape
- 2 paper clips
- 20 marbles (or 30 coins)

TIME

8 minutes

SCORING

- A. 5 points for each marble you successfully transport from one bowl to the other
- B. 10 points if you use only 2 materials
- C. Up to 20 points for the creativity of your device

REFLECT ON WHAT YOU DID

- Which materials were the easiest to use? Which were the most difficult?
- Which materials would you like to have had more of?

EXTEND YOUR IDEAS

- Using the same materials, how can you create a different device to transport the marbles?
- Using the same materials, how can you create a different device to transport 30 coins?

GOT EGGS?



Note: If you do not want to use an egg, you can use something of similar size and weight.

LEARNING OUTCOMES

Kids will utilize the innovation and design process, think creatively and critically, draw conclusions, and make inferences

CHALLENGE

Build a freestanding tower as tall as possible that can suspend a hard-boiled egg.

MATERIALS

- 10 straws
- 10 mailing labels or 20 inches (51 cm) of masking tape
- 2 sheets of paper
- 6 inches (15 cm) of string
- 1 small paper cup

TIME

10 minutes

SCORING

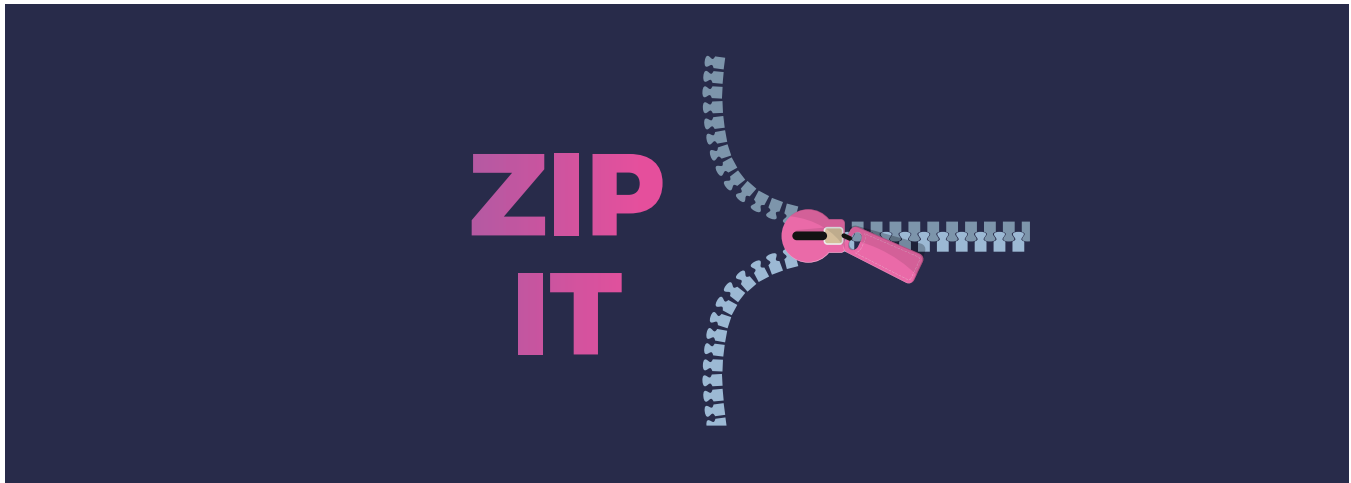
- A. 10 points if you use only 4 of the materials
- B. 20 points if you use only 3 of the materials
- C. 10 points if your egg is suspended safely without falling
- D. Up to 20 points for the creativity of your structure

REFLECT ON WHAT YOU DID

- What was the most difficult part of this Challenge?
- Which materials were the most difficult to use?

EXTEND YOUR IDEAS

- What other materials do you have on hand that could be used to create a new solution to the challenge?
- Using the same materials, can you build a freestanding tower as tall as possible that can hold the egg?



LEARNING OUTCOMES

Kids will utilize the innovation and design process, think creatively and critically, draw conclusions about geometry principles, and make inferences

CHALLENGE

Create a zip line that is at least 3 feet (.9 meters) in length that can transport Ping-Pong balls from the top of the zip line to a bowl at the end. The balls must go into the bowl without anyone touching them.

MATERIALS

- 6 feet of string
- 8 straws
- 12 mailing labels or 24 inches (61 cm) of masking tape
- 2 sheets of paper, 1 small paper cup
- 5 Ping-Pong balls (or other items of similar size you have available)

TIME

20 minutes

SCORING

- A. 5 points for each Ping-Pong ball you successfully transport to the bowl
- B. 10 points if your zip line is at least 4 feet in length
- C. Up to 20 points for the creativity of your device

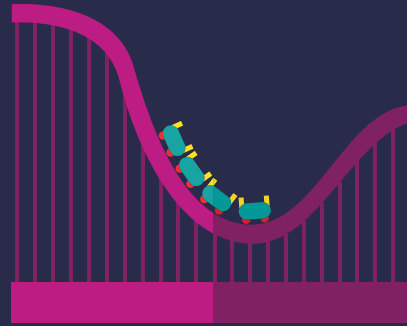
REFLECT ON WHAT YOU DID

- What was the most difficult part of this challenge? What was the easiest?
- How did the angle of the string affect the transportation of your Ping-Pong balls?
- Which materials would you like to have had more of?
- What was the easiest material to use to transport your Ping-Pong balls? Did you use that material?

EXTEND YOUR IDEAS

- Can you solve this challenge again using a different set of materials to build your transportation device?
- Try transporting heavier objects with your existing device or build a device that can transport more weight.

ROLLIN' ALONG



Note: This is a free-play activity that includes no constraints on the number of materials. There is also no time limit for this challenge.

LEARNING OUTCOMES

Kids will utilize the innovation and design process, think creatively and critically, and use technical design and construction

CHALLENGE

Design and build a rollercoaster that can transport a Ping-Pong ball from the top of the coaster to the end.

MATERIALS

Have your kids collect at least 10 different materials from around the house to build their roller coaster. You can even make it a scavenger hunt! For example, collect the following: something made out of cardboard, something you can drink out of, something that's sticky on the back, something made from trees, something made of plastic, something that is bendable, etc. If you would like to provide a determined set of materials, you could include the following: cardboard tubes cut in half, a pack of straws, mailing labels or pieces of tape, chenille stems (pipe cleaners), craft sticks, toothpicks, paper

SCORING

- A. 10 points if your roller coaster is at least 16 inches (41 cm) high
- B. 10 points if your roller coaster has at least 4 turns
- C. 10 points if your Ping-Pong ball travels successfully from the top of the roller to the bottom
- D. 15 points if you use 4 or fewer materials in your solution
- E. 10 points if you use 5 or more materials in your solution
- F. Up to 20 points for the creativity of your roller coaster

REFLECT ON WHAT YOU DID

- Which materials were the most difficult to use? Which were the easiest?
- What did you like most about solving this challenge?

EXTEND YOUR IDEAS

- How can you solve this challenge again using a different set of materials?
- Build a roller coaster that goes underneath a couple of chairs or a table and comes out on the other side carrying the Ping-Pong ball.