

DUCT TAPE CHALLENGE

Rectangular Prism - FOR EVENT LEADER

MATERIALS: Each team gets the following:

- 1 roll of duct tape
- 6 sheets of paper
- 4 popsicle sticks

Teams may also bring something to write with, a stopwatch, 1 scissors, and 1 ruler.

There are extra materials if a team discovers they are missing something, or something is damaged. It is THEIR responsibility to check materials before the competition begins. Their instruction sheet tells them to do so.

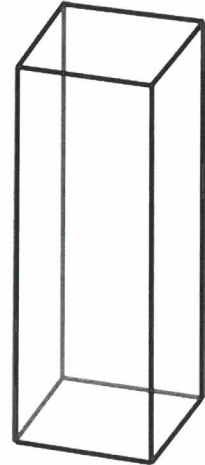
Teams also need a copy of the instruction sheet.

You need a way to time the **35 minute build time.**

Please note- teams cannot intentionally attach their prism to the floor or a wall, etc.. It is extremely possible that the prism will have sticky parts of the duct tape that unintentionally want to stick to the floor on the bottom of the prism, that is ok. You can tell the difference between incidental stickiness and intentional taping to the floor. If it is sticking to the floor, have them cover the bottom with tape or paper.

Note: measure the height before you place the tennis ball on top in case it topples during testing.

TIEBREAKER: The team with the greatest surface area of the top of the prism wins (measure length x width in cm). You should measure this for all teams, but you only need to do the math if there is a tie.





Duct Tape Challenge – RECTANGULAR PRISM

School _____

Names: _____, _____

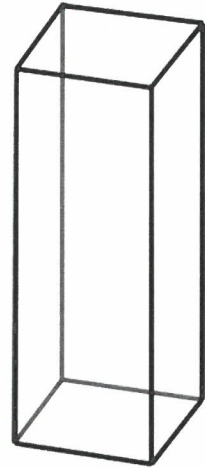
You are responsible for making sure you have all the materials and that none are damaged. DO THIS NOW!

1 roll of duct tape

6 sheets of paper

4 popsicle sticks

TASK: Build a rectangular prism as tall as possible. It must have 4 walls, a solid base, and a solid top. It must be free standing (you cannot tape it to the floor, a wall, a table, etc). The prism will be measured to the tallest point of its flat top. If it falls over it will be measured to the tallest remaining point. If the prism can hold a tennis ball for 3 seconds, a bonus of 10cm will be added to the height. The ball cannot be taped to the prism in any way.



SCORING: The tallest prism wins. Teams that do not have 4 identifiable walls, a base, and a top will be placed in Tier 2. If the Prism holds the ball for at least 3 seconds, 10cm will be added to the height.

TIEBREAKER: The team with the greatest surface area of the top wins the tie (length x width in cm).

FOR EVENT LEADER

Height of Prism (in cm to the nearest tenth): _____

Length _____ (cm) x width _____ (cm) of top (tiebreaker): _____

Tier 1: Has 4 identifiable walls, a base, and a top _____

Tier 2: Does not have 4 identifiable walls, a base, and a top _____

Holds the tennis ball for at least 3 seconds (+10 cm) _____

TOTAL HEIGHT: _____ TIER: _____ FINAL RANK: _____

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DUCT TAPE CHALLENGE

Arch - FOR EVENT LEADER

MATERIALS: Each team gets the following:

- 1 roll of duct tape
- 6 sheets of legal size paper

Teams may also bring something to write with, a stopwatch, 1 scissors, and 1 ruler.

There are extra materials for if a team discovers they are missing something, or something is damaged. It is THEIR responsibility to check materials before the competition begins. Their instruction sheet tells them to do so.

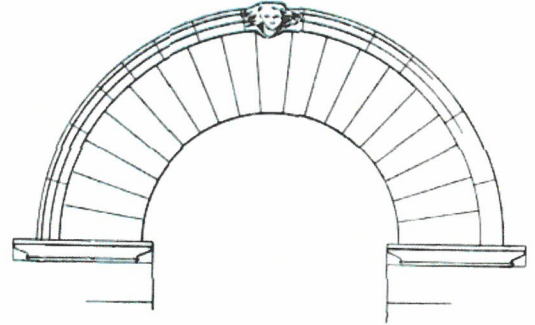
Teams also need a copy of the instruction sheet.

You need a way to time the **35 minute build time**.

Please note- teams cannot intentionally attach their arch to the floor or a wall, etc.. It is extremely possible that the base will have sticky parts of the duct tape that unintentionally want to stick to the floor on the bottom of the arch, that is ok. You can tell the difference between incidental stickiness and intentional taping to the floor. They can add a piece of tape to the bottom to make it not stick.

Note: measure the height of the arch first in case it topples during testing.

TIEBREAKER: The team with the greatest distance between the two bases wins (measure length in cm to the nearest tenth).



Duct Tape Challenge 2019 – Arch

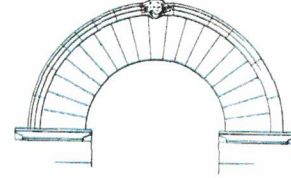
School _____ V. JV1. JV2. JV3

Names: _____ , _____

You are responsible for making sure you have all the materials and that none are damaged. DO THIS NOW!

1 roll of duct tape

6 sheets of legal size paper



TASK: Build the tallest, longest arch possible. The arch must be free standing (you cannot tape it to the floor, a wall, a table, etc). It will be measured to the tallest point of its curve (bottom of the curve) and between the bases of the arch. If it falls over, only the width will be measured. It must curve – it cannot come to a sharp angle at the top. **You will have 35 minutes to build.**

SCORING: The height of the arch and the length between the two ends will be measured in centimeters.

TIEBREAKER: The team with the greatest distance between the bases of the arch wins the tie.

SCORING: The tallest, longest arch wins.

TIEBREAKER: The team with the greatest distance between the bases of the arch wins the tie.

FOR EVENT LEADER

Height of arch to the bottom of the arch (in cm to the nearest tenth): _____

Distance (in cm to the nearest tenth) inside the bases (also tiebreaker): _____

Score = height + base: _____

Tiebreaker needed? _____

Final rank: _____

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DUCT TAPE CHALLENGE

Eiffel Tower - FOR EVENT LEADER

MATERIALS: Each team gets the following:

- 1 roll of duct tape
- 3 sheets of paper

Teams may also bring something to write with, a stopwatch, 1 scissors, and 1 ruler.

There is one extra set of materials for if a team discovers they are missing something, or something is damaged. It is THEIR responsibility to check materials before the competition begins. Their instruction sheet tells them to do so.

Teams also need a copy of the instruction sheet.

You need a way to time the **35 minute build time**.

Please note- teams cannot intentionally attach their arch to the floor or a wall, etc. It is possible that the base will have sticky parts of the duct tape that unintentionally want to stick to the floor on the bottom of the tower, that is ok. You can tell the difference between incidental stickiness and intentional taping to the floor. They can add a piece of tape to the bottom to make it not stick.

Note: measure the height to the tallest point and the base size in case of a tie.

TIEBREAKER: The team with the greatest base area (length x width) wins.



Duct Tape Challenge 2019 – Eiffel Tower

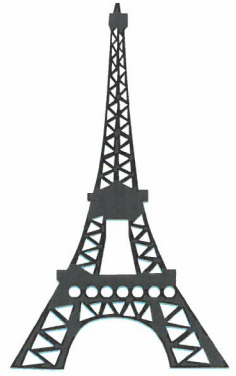
School _____

Names: _____ ,

You are responsible for making sure you have all the materials and that none are damaged. DO THIS NOW!

1 roll of duct tape

3 sheets of paper



TASK: Build the tallest freestanding Eiffel Tower. It must have 4 legs – not a solid base, and open sides (cannot be solid, you must be able to see through to the other side).

The tower must be free standing (you cannot tape it to the floor, a wall, a table, etc). It will be measured to the tallest point. If it falls over it will be measured to the tallest remaining point.

You will have 35 minutes to build.

SCORING: The height and the base size will be measured in centimeters.

TIEBREAKER: The team with the greatest base wins the tie.

SCORING: The tallest tower wins.

FOR EVENT LEADER

Height of tower to tallest point (in cm to the nearest tenth): _____

Base area size length _____ x width _____ (in cm to the nearest tenth) (tiebreaker): _____

Has 4 legs holding up the tower: Yes or No

Has open sides – you can see through the structure: Yes or No

If either question is NO, then Tier 2. Otherwise, Tier 1.

Tier: 1 2

Final Rank: _____

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Duct Tape Challenge 2019 – Eiffel Tower

School _____

Names: _____ ,

You are responsible for making sure you have all the materials and that none are damaged. DO THIS NOW!

1 roll of duct tape

3 sheets of paper



TASK: Build the tallest freestanding Eiffel Tower. It must have 4 legs – not a solid base, and open sides (cannot be solid, you must be able to see through to the other side).

The tower must be free standing (you cannot tape it to the floor, a wall, a table, etc). It will be measured to the tallest point. If it falls over it will be measured to the tallest remaining point.

You will have 35 minutes to build.

SCORING: The height and the base size will be measured in centimeters.

TIEBREAKER: The team with the greatest base wins the tie.

SCORING: The tallest tower wins.

FOR EVENT LEADER

Height of tower to tallest point (in cm to the nearest tenth): _____

Base area size length _____ x width _____ (in cm to the nearest tenth) (tiebreaker): _____

Has 4 legs holding up the tower: Yes or No

Has open sides – you can see through the structure: Yes or No

If either question is NO, then Tier 2. Otherwise, Tier 1.

Tier: 1 2

Final Rank: _____

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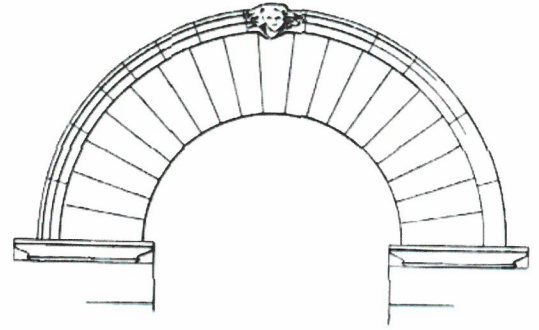


DUCT TAPE CHALLENGE

Arch FOR EVENT LEADER

MATERIALS: Each team gets the following:

- 1 roll of duct tape
- 2 sheets of l paper
- 4 popsicle sticks



Teams may also bring something to write with, a stopwatch, 1 scissors, and 1 ruler.

There are extra materials for if a team discovers they are missing something, or something is damaged. It is THEIR responsibility to check materials before the competition begins. Their instruction sheet tells them to do so.

Set piles of these supplies out around your space so that everyone has room to work. Give frequent time checks, especially for the last minute to 'hands-off.'

If students finish early, start measuring early. You don't want arches falling over because it is taking a long time to get the measurements.

Teams also need a copy of the instruction sheet.

You need a way to time the **35 minute build time.**

Please note- teams cannot intentionally attach their arch to the floor or a wall, etc.. It is extremely possible that the base will have sticky parts of the duct tape that unintentionally want to stick to the floor on the bottom of the arch, that is ok. You can tell the difference between incidental stickiness and intentional taping to the floor. They can add a piece of tape to the bottom to make it not stick.

Note: measure the height of the arch first in case it topples during testing.

TIEBREAKER: The team with the greatest distance between the two bases wins (measure length in cm to the nearest tenth).

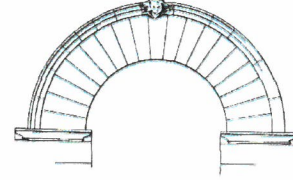
Duct Tape Challenge 2019 –Arch

School _____ V JV1 JV2 JV3

Names: _____ , _____

You are responsible for making sure you have all the materials and that none are damaged. DO THIS NOW!

- 1 roll of duct tape
- 2 sheets of paper
- 4 popsicle sticks



TASK: Build the tallest, longest arch possible. The arch must be free standing (you cannot tape it to the floor, a wall, a table, etc). It will be measured to the tallest point of its curve (bottom of the curve) and between the bases of the arch. If it falls over, only the width will be measured. *It must curve – it cannot come to a sharp angle at the top. You cannot use the actual roll of duct tape in your design. You will have 35 minutes to build.*

SCORING: The height of the arch and the length between the two ends will be measured in centimeters to the nearest tenth.

TIEBREAKER: The team with the greatest distance between the bases of the arch wins the tie.

SCORING: The tallest, longest arch wins. If your arch cannot stand, the distance between the base when lying down will be measured and your device will be put in Tier 2. If your arch comes to a sharp point at the top instead of curving, it will be placed in Tier 2.

TIEBREAKER: The team with the greatest distance between the bases of the arch wins the tie.

FOR EVENT LEADER

Freestanding? _____ Curve at the top (not a sharp point)? _____ If No to either, Tier 2.

Height of arch to the bottom of the arch (in cm to the nearest tenth): _____

Distance (in cm to the nearest tenth) inside the bases (also tiebreaker): _____

Score = height + base: _____

Tiebreaker needed? _____

Tier: _____

Final rank: _____

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