***Engineering Zone***



**Challenge:**

Make a toy that you can push or pull. Make it go fast. Make it go slow.

**Materials:**

Use the materials in your maker box.

**Submission of Request for Proposal:**

Create a toy and show the class how it can move fast and how it can move slow. Show and tell us whether it is moved by a push or a pull. Show and tell how it can move fast and how it can move slow.

***Engineering Zone***



1

**Challenge:**

Make a toy that you can push or pull. Make it go fast. Make it go slow. Make it move in a straight line, zigzag, ,back-and-forth, or around and around.

**Materials:**

Use the materials in your maker box.

**Submission of Request for Proposal:**

Create a toy and show the class how it can move fast and how it can move slow. Show and tell us whether it is moved by a push or a pull. Show and tell how it can move fast and how it can move slow. Show and tell it move in a straight line, zigzag, ,back-and-forth, or around and around.

***Engineering Zone***



2

**Challenge:**

Make a magnetic vehicle that can be pushed or pulled by a magnet.

**Materials:**

Use the materials in your maker box.

**Submission of Request for Proposal:**

Create a toy and show the class how it can be pushed or pulled by a magnet.

***Engineering Zone***



3

**Challenge:**

Create a vehicle that can be powered by air.

**Materials:**

Use the materials in your maker space.

**Submission of Request for Proposal:**

Create a toy that can moved using air. Show and tell how air moves your vehicle.

***Engineering Zone***



4

**Challenge:**

Create a vehicle that can travel down a ramp powered by gravity. Test each vehicle one at a time and compare the speed of each by comparing the time it takes to travel a specified distance

.**Materials:**

Use the materials in your maker space.

**Submission of Request for Proposal:**

Create a vehicle that can travel down a ramp powered by gravity. Test each vehicle one at a time and compare the speed of each by comparing the time it takes to travel a specified distance.

***Engineering Zone***



5

**Challenge:**

Create a vehicle that can travel down a ramp powered by gravity. Test each vehicle one at a time and compare the speed of each by comparing the time it takes to travel a specified distance. Investigate how adding weight to the vehicle effects its speed.

**Materials:**

Use the materials in your maker space.

**Submission of Request for Proposal:**

Create a vehicle that can travel down a ramp powered by gravity. Test each vehicle one at a time and compare the speed of each by comparing the time it takes to travel a specified distance. Collect data and use it to explain how weight affects the speed at which vehicles travel.

***Engineering Zone***



**Challenge:** Make a birdfeeder that will attract local birds so that we can see and observe them through our classroom windows.

**Materials:** Use recycled containers as the main structure. Any materials from the makerspace may be used for parts such as perches and hangers. Feeders must be safe for birds to use.

**Submission of Request for Proposals:** All proposals must be submitted as working models. Birds must be able to land on the feeder and eat from it. The feeder must be able to be hung in a tree.

***Tip****: Know what type of feet the birds you want to attract have so that you can design a landing that the birds can hold onto.*