

Forces Unit Outline

By: Melissa Master

Big Idea:

Both physical and social environments respond to direct and indirect forces.

Integrated Components:

Science

- a. We transformed our classroom into hands-on **Direct Force Exploratory Stations** (ex. tug-of-war, bowling, arm wrestling, race cars, hula hoops)
- b. We applied the scientific method through fun **Science Experiments** that applied Indirect Force (ex. gravity, static electricity, magnetism). See the science experiment handouts for more information.

Reading

- a. We determined whether direct/indirect force was **used between characters in stories** (ex. a girl tried to convince her friend to give her special moccasins by using manipulation tactics in a short story called **“Best Friends”**) and discussed how to be better friends in the real world.
- b. We analyzed the role that indirect force can play in social situations through a chapter book called **“Frindle”** (ex. analyzed how students were able to influence an entire town to change the name of a pen to “Frindle”... we realized the power that one person has to change an entire community!)
- c. We discussed the book **“I Am Malala”** and how one person had the power to influence the whole world.

Writing

- a. We wrote **alternate endings** for the **Cain and Abel** story (see the Jewish Studies section below for more details)
- b. We designed **gravity posters** with non-fiction text features (heading, illustration, captions, etc) to explain what life would be like living with gravity on the **Moon vs. Jupiter vs. Earth**

Art

- a. We use **coil and plasticine** to create structures that represent **real life examples of push and pull forces** (ex. someone skateboarding, someone doing a push up, someone dancing)

Jewish Studies

- b. **Cain and Abel** (we learned that he killed his brother with a rock when he was angry/jealous, clearly using a *direct* force). We discussed how direct force (pushing/kicking/killing) is NOT always the best answer and then wrote our own *new endings* for the story (using *indirect* forces instead).

Examples:

- I. Cain should have taken deep breaths and a walk to calm down
 - II. Cain should have had a conversation with Abel, mom, or friends
 - III. Cain should have used words rather than actions to problem solve
- c. We looked for other examples of **direct and indirect forces in Jewish stories** (ex. Moses parting the sea, Moses convincing Pharaoh to let his people go)

Drama

- a. We learned about **tableaux**, then created group scenes that demonstrated how gravity would affect life on Earth vs. Moon vs. Jupiter
- b. We learned that different **emotions/body language** can indirectly force people to do things and then acted out many types of emotions
- c. We created scenes that showed various strategies children use to convince their parents to buy them things at the toy store (ex. crying, using a cute face)
- d. We used these drama scenes to **analyze the effectiveness and consistency of using direct/indirect force in real-life situations** (ex. crying may influence one parent to buy their child the toy, but may cause another parent to get mad and leave the store, however being polite/using a cute face may be more *consistently* effective at convincing parents to buy their children toys)

Media Literacy and Technology

- a. We learned various **Elements of Advertising** (ex. slogan, spokescharacters, website themes, “free” stuff, repetition, catchy jingles, target audience)
- b. We learn how to **read food labels** and the tricks that marketers often use to make their products appear healthier than they actually are (ex. serving size confusion, “fat-free” with tons of sugar, etc)
- c. Through a **Cereal Box Activity**, we learned how advertisers influence us to buy cereals that we may not otherwise buy. We cut everything out, except for the product itself (ex. mazes, recipes, coupons, toys, fruits not included). After cutting out all gimmicks, we were left with only a tiny bit of cardboard! We also noticed that the **healthier cereals used LESS advertising tricks!**
- d. **Coco Crunch Website** to better understand these advertising gimmicks (<http://mediasmarts.ca/sites/mediasmarts/files/games/coco/flash/start.html>)
- e. Applied advertising elements by **creating our own website designs** that promote healthier snacks.
- f. Now that we know advertiser tricks, we can make smarter purchases in stores!