Daily DE

HIGH SCHOOL GRADES 9-12
Week 1: Grades 9-12

**MONEY MONDAY**
Explore self-paced online modules and other tools to equip you to make sound financial decisions to meet your life goals.

**TECH TUESDAY**
Learn more about the way that emerging technologies are solving everyday problems.

**WELLNESS WEDNESDAY**
Empower yourself to make good decisions for the health and well-being of yourself and those in your community.

**TRY-IT THURSDAY**
Get hands-on as you engage in the scientific thinking process.

**FIELD TRIP FRIDAY**
Go on virtual field trips to amazing destinations and learn more about the many career options available to you.

**WEEKEND CHALLENGE**
Create a video, write a poem, song, or blog, or produce a painting or piece of artwork, that demonstrates the chosen medium’s potential to create a community that is stronger than hate.

Teaching with Testimony Challenge
Money Monday
What are your goals for the future? Learn about goal-setting and strategies to help you reach those goals.

Pathway to Financial Success in Schools
Tech Tuesday
Tensile Bubbles

Have you ever wondered what the buildings of the future might look like?

Explore the concept of tensile structures by building geometric bubbles that distribute the weight of the bubble.

Click the link below to see the teacher version of the activity or advance to the next slide for materials and instructions.

Innovation Generation
The word “tension” comes from a Latin word that means “to stretch.”

Tension is a force that occurs along a flexible medium, like a rope or cable.

Tension is an outward, pulling force—you can’t push a rope!

The force of tension in a rope has to equal the weight of the mass it supports. You might recognize this as a form of Newton’s third law: for every action, there is an equal and opposite reaction.

Can you design at least three different shapes?

Materials

- Straws (5–10)
- Pipe cleaners (5–10)
- Bubble solution (you can choose to buy bubble solution or make your own with dish soap and water)
- Ruler
- Different sized containers for bubble solution (Tupperware, old paint trays, etc.. )
- Scissors

What kind of bubbles do these shapes produce?
Wellness Wednesday
Explore resources to be informed about the science of addiction, how the brain works and the signs/symptoms of misuse.

After reviewing the information, create an infographic to help educate others about this important topic.

**The Problem of Opioid Abuse**

Check out: **Dose of Knowledge**

**VIDEO**

**Opioids and their Effects**

Grades 9-12

Meet Fernando, a CVS pharmacist who will talk to students about opioids, the risk associated with substance misuse, and what students should do if they are prescribed an opioid.

**Download the digital lesson for more information.**
Try-It Thursday
Make a Hovercraft!

Investigate the relationship between friction and motion by building a simple hovercraft.

FLOATING ON AIR

Level of Difficulty: 2
Grade Range: 9-12
Activity Time: 45-60 min
Career Path: Manufacturing
Topic: Transportation

OVERVIEW
Hovercrafts use pressurized air to travel smoothly on land or water. They are used for search and rescue efforts and to train astronauts for space missions. Hovercrafts can even transition from land to water, making them an exciting amphibious vehicle. In this activity, students will investigate the relationship between friction and motion by building a simple hovercraft.

STEM LESSON FOCUS
STEM incorporates Science, Technology, Engineering, and Mathematics to focus on real-world issues and problems guided by the engineering design process. This type of instruction supports students in developing critical thinking, collaboration, reasoning, and creative skills to be competitive in the 21st-century workforce.

Each Siemens STEM Day classroom activity highlights one or more components of the
Floating on Air

Materials

- Used compact disks (CDs)
- strong glue
- large balloon
- sports bottle cap (push/pull closure)
- stopwatch

Consider

- What are the forces acting on an object when it is resting on a surface?
- What are the forces acting on the object when it is lifted off a surface?

Explore

- Launch your hovercraft on a smooth flat surface
- Launch your hovercraft on a variety of different surfaces
- Explore what happens when an added force (push) is applied
- Explore what happens when a different volume of air is used in the balloon (downward force)

Reflect

- What allows the hovercraft to become frictionless?
- What factors are critical to consider when designing a working hovercraft?
- How do different surfaces affect the hovercraft?

Adapted from Siemens STEM Day
Field Trip Friday
Get a behind-the-scenes look at a working copper mine as we hear from different professionals at Freeport-McMoRan and learn about their role in the mining process from mine planning to reclamation.

Explore: Dig Into Mining
Learn More About Mining

VIRTUAL LAB
START

DIG INTO MINING
THE STORY OF COPPER

Discovery Education

Dig Into Mining Virtual Lab
After watching the Virtual Field Trip and doing the virtual lab, use the interactive to explore mining careers that might be for you.
After answering the twelve questions, careers will be recommended based on your selections.

Discuss these results with someone.

• Do any of these careers appeal to you?
• What might you need to study for the career that is most appealing to you?
• What else might you need to do to prepare for this career?
• Use the internet to research more about this career and its options.