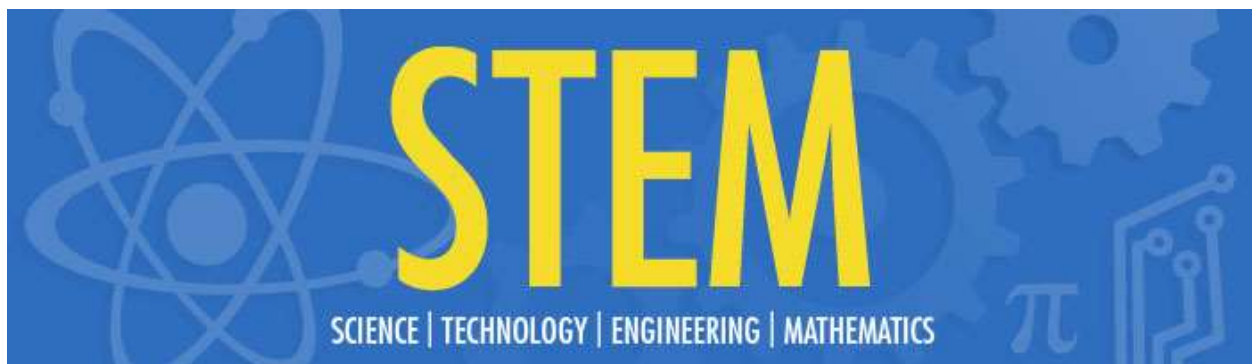


**CEDARCREST STEM/SCIENCE
NEWSLETTER 3/9/2018:**



**STUDENTS SHOWCASED SOME
INCREDIBLE ENGAGING STEM, SCIENCE
AND TECHNOLOGY PROJECTS AT THE
CEDARCREST SCIENCE FAIR**



**OUR CEDARCREST STEM/SCIENCE STUDENTS HAVE
ONCE AGAIN ENGAGED IN MINDS ON/HANDS ON
LESSONS HERE AT CEDARCREST THAT WERE
SHOWCASED AT OUR SCIENCE/STEM FAIR.**

**PARTICIPANTS INCLUDED STUDENTS
FROM:**

6th GRADE SCIENCE: MS KUKULL AND MR. STODDARD

**MR. SHREEVE'S STEM CLASSES: 21ST
CENTURY, HOW THINGS WORK AND EXPLORING
COMPUTER SCIENCE**

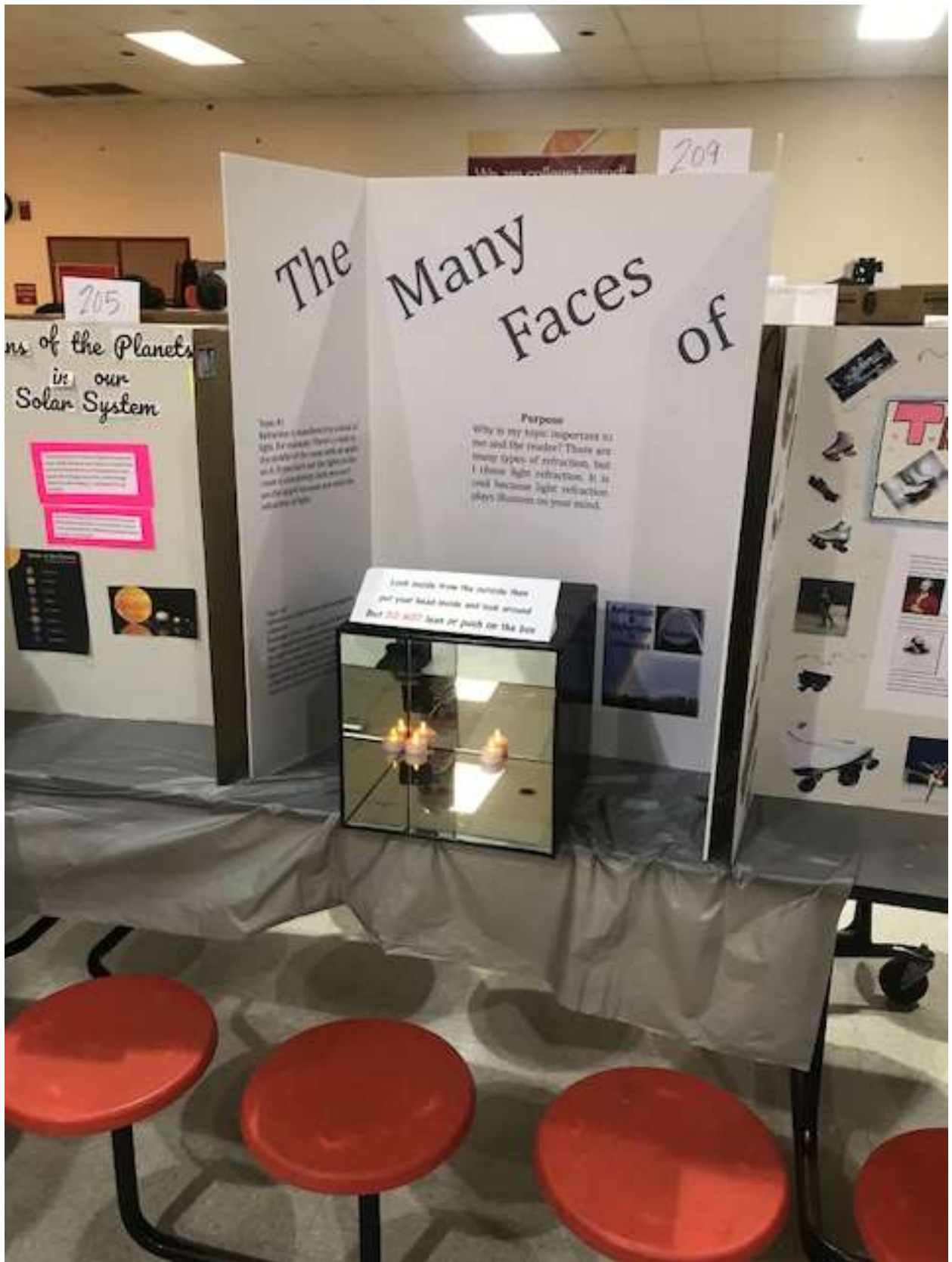
7th GRADE SCIENCE: Ms. Dainard and Ms. Delazzarl

MR. DESCHAINED'S STEM TECH (7TH GRADE)

**MRS. MACK'S STEM CLASSES: STEM FOODS AND
STEM NUTRITION**

**8TH GRADE SCIENCE: Mr. Schaufler and Mr.
Overland**

**CEDARCREST'S FLL (FIRST LEGO LEAGUE)
CLUB**



The Many Faces of

ns of the Planets
in our
Solar System

215

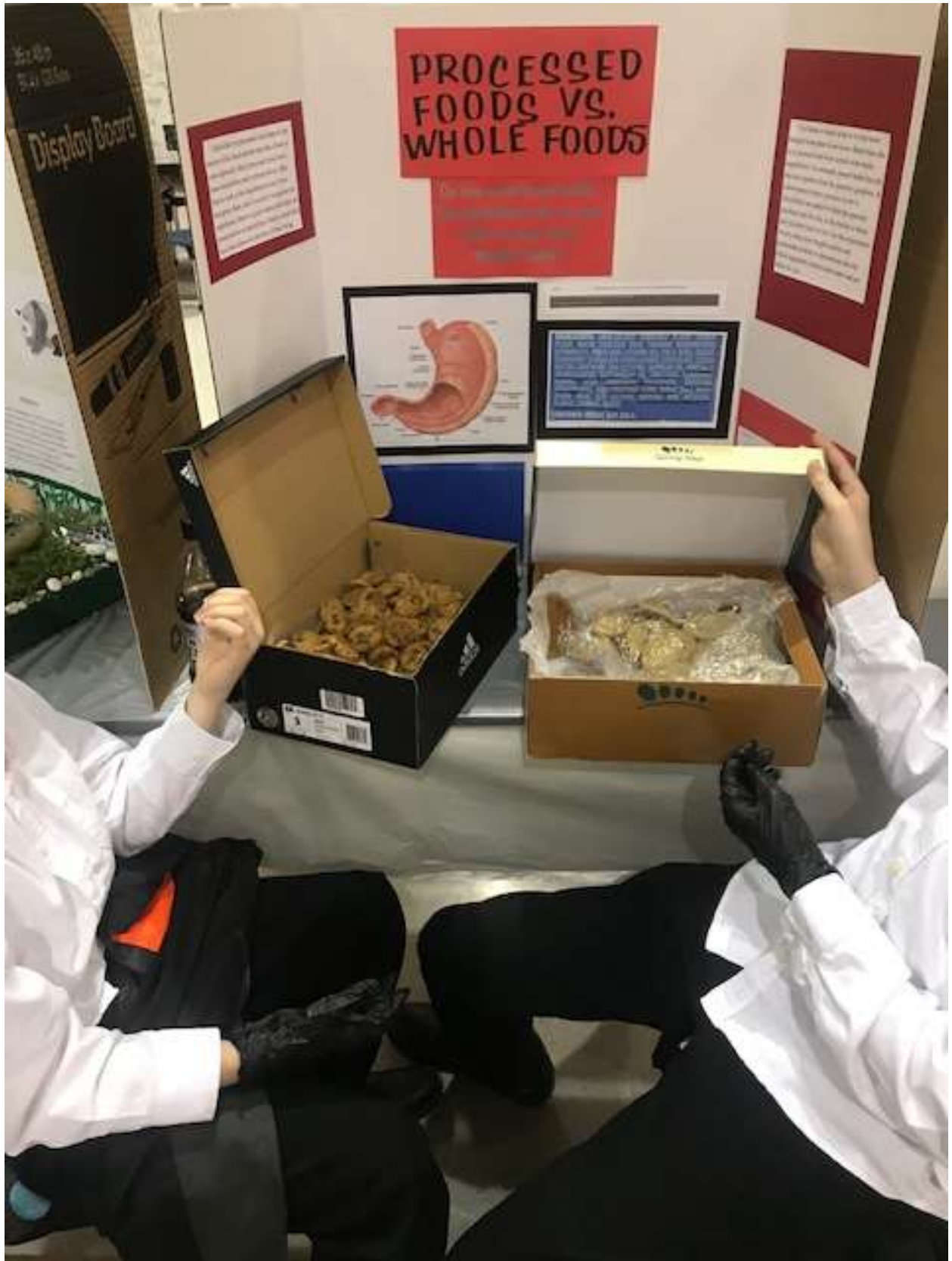
209

Topic: Light
Refraction is a fundamental concept of light. It makes things visible. The ability of the eye to see light is due to it. It is a part of the light that makes a rainbow. It is a part of the light that makes a rainbow. It is a part of the light that makes a rainbow.

Purpose
why is my topic important to me and the reader? There are many types of refraction, but I chose light refraction. It is cool because light refraction plays illusions in your mind.

Look inside from the outside then put your head inside and look around. But **DO NOT** lean or push on the box





227

THE DANGERS OF HEAVY BACKPACKS

The Safe Load

Grade	Weight
Elementary	10%
Middle	15%
High	20%

Health Hazards of Heavy Backpacks

Carrying a heavy backpack can cause back pain, neck pain, and headaches. It can also lead to poor posture and difficulty breathing. Heavy backpacks can also cause fatigue and reduce a student's ability to concentrate in class.

Do you really need to carry the books home every day?

Consider leaving books at school or using a locker. Only carry books you need for the next day.

Purpose

The purpose of this research project is to show that many students carry heavy backpacks that cause health problems.

What Needs Support?

Students need support in their backs to carry heavy backpacks. This support comes from the muscles in the back and the spine.



Consider your backpack weight in the school.

Carrying a heavy backpack can cause back pain, neck pain, and headaches. It can also lead to poor posture and difficulty breathing. Heavy backpacks can also cause fatigue and reduce a student's ability to concentrate in class.

Do you really need to carry the books home every day?

Consider leaving books at school or using a locker. Only carry books you need for the next day.

What do you do if you...

If you have back pain, neck pain, or headaches, you should see a doctor. You should also try to reduce the weight of your backpack. You can do this by leaving books at school or using a locker. You can also try to use a backpack with a better design.



Oobleck



Oobleck may be a solid and a liquid at the same time but it does dry out if not concealed in a container. But you don't have to worry about this experiment because, it is safe to do with children the ingredients are simple, you mix cornstarch and water together but make sure you don't add too much water because it will dilute the cornstarch and the experiment will be a bad ending. If you would like to use food dye I would suggest not using so much it simply can dye your hand which

other food dye you may be using so 1 to 3 drops would be good but if you do not like the color it comes out with you can add as many drops you would like till you are happy.



What's in the cornstarch make it react to the water make oobleck?

There is really only two components in oobleck, water and cornstarch. The main chemical reaction that is involved is when you mix oobleck. The substance turns from a liquid into a solid. But what ingredient in cornstarch causes the oobleck to have the texture that we all love?



INGREDIENTS



Solid

OR

Liquid



210

2

DISSOLVING SKITTLES EXPERIMENT

Hypothesis:

If I use cold water, then the color will dissolve faster because it is cold.

Variables:

Independent: Temperature of water
Dependent: Time for color to dissolve
Controlled: Amount of water, amount of skittles

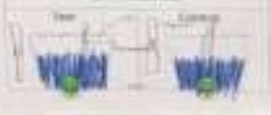
Materials:

- 2 beakers
- 100 ml of water
- 100 ml of cold water
- 100 ml of hot water
- 100 ml of room temperature water
- 100 ml of ice water
- 100 ml of boiling water
- 100 ml of tap water
- 100 ml of distilled water
- 100 ml of filtered water
- 100 ml of bottled water
- 100 ml of spring water
- 100 ml of mineral water
- 100 ml of purified water
- 100 ml of deionized water
- 100 ml of reverse osmosis water
- 100 ml of ultra-pure water
- 100 ml of distilled water
- 100 ml of filtered water
- 100 ml of bottled water
- 100 ml of spring water
- 100 ml of mineral water
- 100 ml of purified water
- 100 ml of deionized water
- 100 ml of reverse osmosis water
- 100 ml of ultra-pure water

Question:

How does water temperature affect time to dissolve?

Setup:



Procedure:

1. Gather Materials.
2. Pour 1/2 of hot water into a cup.
3. Put 1 Skittle in water. Start stopwatch.
4. When color disappears, stop timing.
5. Repeat 2 more times.
6. Repeat 2-5 three times using cold water.

Data Table:

Skittles Experiment

Temp. of water	Time to dissolve (min)	Time to dissolve (min)	Time to dissolve (min)
Hot 80°	2:06	1:05	1:05
Cold 52°	1:01	3:34	0:33



Conclusion:

1. The hot water dissolved the Skittles much faster than the cold water. The hot water dissolved the Skittles in 1:05, while the cold water took 3:34 to dissolve. This shows that temperature affects the rate of dissolution.
2. The hot water dissolved the Skittles in 1:05, while the cold water took 3:34 to dissolve. This shows that temperature affects the rate of dissolution.
3. The hot water dissolved the Skittles in 1:05, while the cold water took 3:34 to dissolve. This shows that temperature affects the rate of dissolution.



STUDENTS WHO PARTICIPATED IN THE SCIENCE/STEM FAIR are developing a deeper understanding of the engineering AND scientific processes.

SUPER SCIENCE

On behalf of the Staff in the STEM/Science Department, **we are committed to making this the best year ever for your child here at Cedarcrest Middle School.**

Sincerely,

The STEM/Science Staff at Cedarcrest

Mr. Stoddard, Ms Kukull, Ms. Dainard, Mrs Delazzari, Mr. Schaufler, Mr. Overland, Mr. Deschaine, Mrs. Mack, and Mr. Shreeve

6th Science, 7th Science, 8th Science, STEM Foods, STEM Tech, STEM Robotics, 21st Century Foundations, and Exploring Computer Science.