



**Weekly Enrichment Plan: Week of May 11**

**Grade: High School**

	May 11	May 12	May 13	May 14	May 15
<b>Math</b> (40 Minutes)	Alg 1, 2, Math 4 <a href="#">How's My Driving</a>	Alg 1, 2, Math 4 <a href="#">How's My Driving</a>	Alg 1, 2, Math 4 <a href="#">How's My Driving</a>	Alg 1, 2, Math 4 <a href="#">How's My Driving</a>	Alg 1, 2, Math 4 <a href="#">How's My Driving</a>
<b>Online Learning Options</b> <ul style="list-style-type: none"> <li>• <a href="#">Khan Academy</a></li> <li>• <a href="#">CK12</a></li> <li>• <a href="#">Study Island</a></li> <li>• <a href="#">Imagine Math</a> (through geometry)</li> <li>• <a href="#">Exact Path</a></li> </ul>	<b>Geometry</b> <a href="#">Golf</a>	<b>Geometry</b> <a href="#">Kaleidoscope</a>	<b>Geometry</b> <a href="#">Kaleidoscope</a>	<b>Geometry</b> <a href="#">Shadow</a>	<b>Geometry</b> <a href="#">Shadow</a>
<b>English Language Arts</b> (40 Minutes)	<b>Values and Beliefs</b> <a href="#">Writing Prompt</a>	<b>Values and Beliefs</b> <a href="#">Writing Prompt</a>	<b>Resilience Unit</b> <a href="#">Description</a>  <b>Invictus</b> Read poem and answer questions	<b>The Secret We Share</b> Read and answer questions	<b>The Secret We Share</b> Read and answer questions
<b>Online Learning Options</b> <ul style="list-style-type: none"> <li>• <a href="#">CommonLit.org</a></li> <li>• <a href="#">Study Island</a></li> <li>• <a href="#">NewsELA</a></li> <li>• <a href="#">Exact Path</a></li> <li>• <a href="#">Imagine Learning</a> 9th-10th grade</li> <li>• <a href="#">Facing History</a></li> </ul>					
<b>Science</b> (40 Minutes)	<a href="#">Exploring Energy</a>	<a href="#">Exploring Energy</a>	<a href="#">Exploring Energy</a>	<a href="#">Exploring Energy</a>	<a href="#">Exploring Energy</a>
<b>Online Learning Options:</b> <ul style="list-style-type: none"> <li>• <a href="#">Khan Academy</a></li> <li>• <a href="#">CK12</a></li> <li>• <a href="#">Study Island</a></li> <li>• <a href="#">McGraw Hill - Clever</a></li> <li>• <a href="#">NewsELA</a></li> </ul>					
<b>Social Studies</b> (40 Minutes)	<a href="#">Fourth Amendment</a>	<a href="#">Fourth Amendment</a>	<a href="#">Fourth Amendment</a>	<a href="#">Fourth Amendment</a>	<a href="#">Fourth Amendment</a>



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<p><b>Online Learning Options:</b></p> <ul style="list-style-type: none"> <li>• <a href="#">Khan Academy</a></li> <li>• <a href="#">Study Island</a></li> <li>• McGraw Hill - <a href="#">Clever</a></li> <li>• <a href="#">NewsELA</a></li> <li>• <a href="#">Facing History</a></li> <li>• <a href="#">CK12</a></li> <li>• <a href="#">Racial Equity and Social Justice Challenge</a></li> </ul>					
<p><b>Student Daily Check-Off</b> (check off each activity that you completed)</p>	<input type="checkbox"/> Math <input type="checkbox"/> English <input type="checkbox"/> Science <input type="checkbox"/> Social Studies	<input type="checkbox"/> Math <input type="checkbox"/> English <input type="checkbox"/> Science <input type="checkbox"/> Social Studies	<input type="checkbox"/> Math <input type="checkbox"/> English <input type="checkbox"/> Science <input type="checkbox"/> Social Studies	<input type="checkbox"/> Math <input type="checkbox"/> English <input type="checkbox"/> Science <input type="checkbox"/> Social Studies	<input type="checkbox"/> Math <input type="checkbox"/> English <input type="checkbox"/> Science <input type="checkbox"/> Social Studies

**Suggested Daily Schedule: Grades 9 - 12**

<b>Time</b>	<b>Activity</b>
8:00 – 9:00 am	Wake up, make your bed, eat breakfast and get ready for an awesome day!
9:00 – 9:40 am	Mathematics
9:40 – 10:20 am	English Language Arts
10:20 – 11:00 am	Science
11:00 – 12:30	Lunch, World Languages, and Free Time
12:30 – 1:10 pm	Social Studies
1:10 – 1:40	Afternoon Exercise
1:40 – 2:10	Current Events – watch the news or read the newspaper OR Language Acquisition
2:10-2:30	Social-Emotional Learning/Reflection/Organize for the Next Day



**Family Suggestions**

<b>Parent Suggestions</b>	<b>Student Suggestions</b>
<p>How can I support my student as a learner outside of school?</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Familiarize yourself with your child's learning calendar.</li><li><input type="checkbox"/> Encourage your child to do their best when completing tasks and assignments.</li><li><input type="checkbox"/> Contact your child's teacher or the district's homework hotline when you or your child have questions or need feedback.</li><li><input type="checkbox"/> Support your child in starting the daily work early in the day. Waiting until the late afternoon or evening to start work adds unnecessary stress and creates missed opportunities for collaboration and feedback.</li><li><input type="checkbox"/> Remind your child to take frequent breaks to stay focused.</li><li><input type="checkbox"/> Consider designating a dedicated workspace to maximize time on task and facilitate learning.</li></ul>	<p>How can I continue learning outside of school?</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Complete work on your suggested learning calendar.</li><li><input type="checkbox"/> Put in your best effort when completing tasks and assignments.</li><li><input type="checkbox"/> Contact your teacher when you need help. Teachers are available via e-mail, your school's online learning program or on the district's homework hotline.</li><li><input type="checkbox"/> Let your teacher know if you have access to a phone or computer.</li></ul> <p>How can I stay organized?</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Start your work early. Waiting until the late afternoon or evening to start work adds unnecessary stress and creates missed opportunities for collaboration and feedback.</li><li><input type="checkbox"/> Take short breaks to increase focus and stay motivated to complete tasks on time.</li><li><input type="checkbox"/> Find a quiet place to complete your work.</li></ul>

## Additional Student Supports

Individual Supports	<ul style="list-style-type: none"> <li>• See “Individualizing Supports for Students” for more information on how to support your child at home with these assignments.</li> <li>• Additional materials are available online and at school meal sites:             <ul style="list-style-type: none"> <li>◦ “Specially Designed Instruction for Students with IEPs” packets with instructional routines that can be used at home to address students’ IEP goal areas.</li> <li>◦ Materials and resources for students with life skills needs and significant disabilities will also be available.</li> </ul> </li> </ul>
English Language Learners	<p><a href="#">Enrichment Packet</a></p> <ul style="list-style-type: none"> <li>• Daily language learning is important! The following links/resources are available for students to access daily language learning.</li> <li>• ¡El aprendizaje diario de idiomas es importante! Los siguientes enlaces/recursos están disponibles para que los estudiantes accedan al aprendizaje diario de idiomas.</li> <li>• Kujifunza lugha ya kila siku ni muhimu! Viungo vifuatavyo/rasilimali vinapatikana kwa wanafunzi kupata mafu nzo ya lugha ya kila siku.</li> <li>• दैनिक भाषा सिक्न महत्वपूर्ण छ! तलका लिंकहरू / स्रोतहरू विद्यार्थीहरूको लागि दैनिक भाषा सिक्ने पहुँचको लागि उपलब्ध छन्।</li> </ul>
AP	<p>College Board is offering free online courses on YouTube! Follow the link below to access their information.  <a href="https://apstudents.collegeboard.org/coronavirus-updates">https://apstudents.collegeboard.org/coronavirus-updates</a></p>

## Individualizing Support for Students in Grades 6-12

### For Students Who Struggle with Reading

#### **Before Reading:**

- For content area reading (nonfiction), provide some background information about the topic addressed in the text. The scholar can go online to look up information on the topic. Have scholar find resources in his/her preferred learning modality (videos, simplified text, activities) and summarize the new information learned.
- Look through the reading passage or book and look at pictures, graphics, and text features such as headings, captions, bolded words, etc. Discuss what you see and make a prediction about what you think will happen. During and after reading, adjust the prediction based on what you read.
- Look through the reading passage or book and identify difficult or unusual words. Have scholar practice decoding these words (reading them aloud). Provide meanings for these words. Create a vocabulary dictionary of these words to refer to later.

#### **During Reading:**

- **Accommodations:** Allow scholar to read aloud if they need to. Provide an audio recording of the text if available.
- **Chunking:** Read one paragraph or section at a time, and check for understanding by asking student to summarize or paraphrase what was read before moving to the next section.
- Make real-world connections (does the book remind you of something in your life? Another book, a movie, etc.)
- Stop and ask questions while reading. Ask questions with answers that can either be found in the reading or could be predictions about what might happen after the passage/story ends.

#### **After Reading:**

- For literature/fiction reading, have your scholar summarize what they read. Use the “5 W’s”
  - Who was the story/passage about?
  - What was the story/passage about? Make sure to include the main idea, some details, and how the story/passage ended
    - What did the character(s) learn?
    - What would be a good title for the story/passage? If one is provided already, what would be a different title you would give the story/passage?
  - When did the story/passage occur? This would be most important for informative and historical passages
  - Where did the story/passage occur?
  - Why? This can be many things, why did a specific character act in a certain manner? Why was a decision made? etc.
  - How? If there was a problem discussed ask how your scholar would have solved the problem differently, or how did that make you feel?
- For nonfiction reading/content area reading, have your scholar summarize what he/she has learned from the text and how he/she would apply the learning to real life.
- Allow an “open book” policy. Make sure that the scholar shows exactly where in the text he/she is getting the information to answer whatever question has been posed.

### For Students Who Struggle with Written Assignments

- Have scholar dictate assignments into a phone's "notes" app or computer with speech-to-text technology. Most speech-to-text will also respond to commands to add punctuation (by saying "comma," "period," etc.). Student can then print out their writing, or copy it into their own handwriting.
- Write one sentence at a time, then have someone read it aloud to make sure it makes sense.
- Provide examples of quality writing that meets the task criteria.
- Accept a written assignment that is shorter than what is expected, as long as the task criteria are met.

### For Students Who Struggle with Math Assignments

- Find a video of someone completing a similar task and have scholar watch it multiple times. Excellent resources for this are YouTube, Khan Academy, and LearnZillion.
- **Talk about math:** Have student explain a problem and its solution in mathematical terms. Have student teach a skill to another student. If they can teach it, they understand it.
- **Accommodations:** For tasks that require problem-solving, allow use of a calculator. Teach student how to use the calculator to accurately solve problems with multiple steps. Also provide access to anchor sheets for math procedures that may not be memorized, such as formulas.
- **Chunk assignments for easier completion/to ease frustration:** If there are 20 math problems to solve, complete 10 and take a break to move around. After the break go back and finish the other 10
- **Fractions:** use round food items to discuss fractions. Example: Cut a frozen pizza into 8 pieces and talk about pieces individually (1 piece is  $\frac{1}{8}$ ) or in parts together (2 pieces is  $\frac{2}{8}$  or  $\frac{1}{4}$ ). Compare and contrast pieces of different sizes.
- **Graph paper:** use graph paper to organize work and problems, and to model mathematical situations visually.
- **Manipulatives:** any small item can be used as a manipulative to help with basic facts. Examples: coins, blocks, pieces of paper cut into smaller pieces. There are also virtual manipulatives online (Google "virtual math manipulatives").
- **Measurement, Money, and Time:**
  - Bake something and have your child measure out all of the ingredients for the recipe.
  - Have your child measure different items around the house and compare the sizes (What is bigger? What is smaller? How many \_\_\_ does it take to measure the couch?)
  - Take a walk outside for a movement break. While walking have them time how long it takes to go for the walk and get back home. Pick something outside like houses and have them count how many they pass while walking. You can also practice skip counting while you walk (example: for each step you take count by 2s, or 5s, or 10s).
  - Create a store using items around your house. Label each item with a dollar amount and have your child "shop" in your store or have them act as the cashier and make change.
  - Create a schedule for the day with times attached. Start with times on the hour and then get progressively more difficult with times on the half hour and quarter hour. Give a specific time they can play a game or use tech. This will help work on math skills and will also help keep your child focused on different tasks throughout the day!
- **Reference materials:** create a number line, hundreds chart, or anchor charts (worked examples) to help with math calculation, counting, and problem-solving.
- **Patterns:** use blocks or toys of similar colors to make a pattern. Example: 3 red Legos, 2 blue Legos, 3 yellow Legos, repeat.
- **Sorting:** Gather a group of toys and have your child sort them based on similar attributes (color, size, shape, etc.). Do the same with a set of books and have your child sort them based on fiction vs. nonfiction, type of book, etc.

- **Make it fun!** Practice math skills using games and things you might already have around the house and turn real-life activities into mathematical opportunities.
  - A deck of cards: each person draws 2 cards and then adds, subtracts, or multiply the numbers reflected on the cards.
  - Dice: can be used the same way as a deck of cards to work on basic facts or create multi-digit problems to solve.
  - Yahtzee: basic addition
  - Connect Four, Othello: problem solving, and strategic thinking
  - Puzzles: perfect for working on spatial awareness, which is key to geometry
  - Monopoly: have your child be the “banker” to work on money skills
  - Battleship: graphing coordinates
  - Uno: use numbers on cards to create calculation problems

**For Students Who Struggle with Focus, Attention, and/or Study Skills**

- Given scholar very clear written (or visual) directions of what to work on and what successful completion of the task looks like. Have scholar self-monitor whether or not he/she has completed all parts of the task.
- Use a timer, starting with a very brief amount of time (even 5-10 minutes is ok). After the timer “beeps,” provide student with a brief break (5 minutes) before continuing. Work to increase the amount of time for each work interval, up to 25 minutes.
- Provide a reward, such as a sticker or carrot, for every successful interval of on-task behavior.
- Only give one assignment or task at a time, but also provide scholar with a calendar or daily schedule to refer to so it is clear what to expect next.
- Have older students model study skills for younger children.

### **High School English Thematic Unit: Resilience**

In this unit, students will read four texts that speak to the theme of resilience. Students will consider the essential questions: “What is resilience? How do we find it within ourselves? How do we develop and maintain it in difficult situations?” Students will read texts from CommonLit and complete a graphic organizer each day that will help them track their own understanding of this theme to prepare to write a poem as a creative response to the works they have read.

Suggested Date	Reading Passage	Assignment to Complete
May 13, 2020	“Invictus”	1. Read the poem and answer the questions* 2. Complete graphic organizer for the text
May 14, 2020	“Depression, the Secret We Share”	1. Read and/or view* Solomon’s speech and answer the questions 2. Complete graphic organizer for the text
May 15, 2020	“Depression, the Secret We Share”	1. Read and/or view* Solomon’s speech and answer the questions 2. Complete graphic organizer for the text

\*resource with additional vocabulary and explanation of ideas is available

May 18-21, 2020

Suggested Date	Reading Passage	Assignment to Complete
May 18, 2020	“If”	1. Read the poem* and answer the questions 2. Complete graphic organizer for the text
May 19, 2020	“How Resilience Works”	1. Read the article and answer the questions* 2. Complete the graphic organizer for the text
May 20, 2020	Read the “Creative Response” guide. Read the rubric. Reread the poems, or excerpts from them, that mattered most to you	Take notes, create a web, or begin drafting your own poem
May 21, 2020	The poems from the unit and your own notes/draft from yesterday	Proofread your work and make any necessary corrections . Type your poem and submit it

\*resource with additional vocabulary and explanation of ideas is available







Name: \_\_\_\_\_ Class: \_\_\_\_\_

## Invictus

By William Ernest Henley  
1875

*William Ernest Henley (1849-1903) was an English poet, critic, and editor. The following poem, published in 1875, is his best known work, which he wrote just after the amputation of his foot due to tuberculosis.<sup>1</sup> As you read, take notes on the poem's form and how it contributes to the tone of the speaker.*

[1] Out of the night that covers me,  
Black as the pit from pole to pole,  
I thank whatever gods may be  
For my unconquerable<sup>2</sup> soul.

[5] In the fell<sup>3</sup> clutch of circumstance  
I have not winced nor cried aloud.  
Under the bludgeonings<sup>4</sup> of chance  
My head is bloody, but unbowed.

[10] Beyond this place of wrath<sup>5</sup> and tears  
Looms<sup>6</sup> but the Horror of the shade,  
And yet the menace<sup>7</sup> of the years  
Finds and shall find me unafraid.

[15] It matters not how strait<sup>8</sup> the gate,  
How charged with punishments the scroll,  
I am the master of my fate,  
I am the captain of my soul.



*"I am the master of my fate, I am the captain of my soul" by Aristocrats-hat is licensed under CC BY-NC-ND 2.0.*

*Invictus by William Ernest Henley is in the public domain.*

1. a disease caused by bacterial infection
2. **Unconquerable (adjective):** unable to be defeated
3. fierce, cruel, or terrible
4. beatings
5. **Wrath (noun):** violent anger
6. **Loom (verb):** to appear in a large, strange, or frightening form
7. **Menace (noun):** a threat
8. narrow (archaic)

## Text-Dependent Questions

**Directions:** For the following questions, choose the best answer or respond in complete sentences.

1. Which of the following best describes a central theme of the text?
  - A. Identity is important to building self-confidence.
  - B. Independence means refusing to follow anyone else's rules or laws.
  - C. Resilience is the ability to keep going and to refuse to give up.
  - D. Sacrifice is necessary to make someone a hero.
  
2. How does the poem's use of darkness in its imagery contribute to the text's overall meaning?
  - A. The poem describes night covering the earth from "pole to pole" (line 2), suggesting that the speaker's outlook on the world is very bleak and hopeless.
  - B. The poem describes "night" (line 1) covering the speaker, symbolic of the adversity and/or suffering he faces.
  - C. The poem describes "the Horror of the shade" (line 10), suggesting that the speaker's hard times are only temporary.
  - D. The poem describes a dark "place of wrath and tears" (line 9), implying that the speaker is overcome by his depression.
  
3. PART A: Given the context of the poem, what does the title word "Invictus" most likely mean?
  - A. Careless
  - B. Lucky
  - C. Unfortunate
  - D. Undefeated
  
4. PART B: Which of the following quotes best supports the answer to Part A?
  - A. "I thank whatever gods may be / For my unconquerable soul." (Lines 3-4)
  - B. "In the fell clutch of circumstance / ...Under the bludgeonings of chance" (Lines 5-7)
  - C. "Beyond this place of wrath and tears / Looms but the Horror of the shade" (Lines 9-10)
  - D. "It matters not how strait the gate, / How charged with punishments the scroll" (Lines 13-14)

Name: \_\_\_\_\_ Class: \_\_\_\_\_

## Depression, The Secret We Share

By Andrew Solomon  
2013

*Andrew Solomon writes on politics, culture, and psychology. This a transcript of his TED Talk, in which Solomon discusses his and others' experiences with depression. As you read, take notes on what different people's experiences with depression have in common.*

[1] I felt a Funeral, in my Brain,  
And Mourners to and fro  
Kept treading — treading — till it seemed  
That Sense was breaking through —  
[5] And when they all were seated,  
A Service, like a Drum —  
Kept beating — beating — till I thought  
My mind was going numb —  
And then I heard them lift a Box  
[10] And creak across my Soul  
With those same Boot of Lead, again,  
Then Space — began to toll,  
As all the Heavens were a Bell,  
And Being, but an Ear,  
[15] And I, and Silence, some strange Race,  
Wrecked, solitary, here —  
And then a Plank in Reason, broke,  
And I dropped down, and down —  
And hit a World, at every plunge,



["Depression"](#) by ryan melaugh is licensed under CC BY 2.0

[20] And Finished knowing — then —<sup>1</sup>

We know depression through metaphors. Emily Dickinson was able to convey it in language, Goya<sup>2</sup> in an image. Half the purpose of art is to describe such iconic states.

As for me, I had always thought myself tough, one of the people who could survive if I'd been sent to a concentration camp.

In 1991, I had a series of losses. My mother died, a relationship I'd been in ended, I moved back to the United States from some years abroad, and I got through all of those experiences intact.

But in 1994, three years later, I found myself losing interest in almost everything. I didn't want to do any of the things I had previously wanted to do, and I didn't know why. The opposite of depression is not happiness, but vitality.<sup>3</sup> And it was vitality that seemed to seep away from me in that moment. Everything there was to do seemed like too much work. I would come home and I would see the red light flashing on my answering machine, and instead of being thrilled to hear from my friends, I would think, "What a lot of people that is to have to call back." Or I would decide I should have lunch, and then I would think, but I'd have to get the food out and put it on a plate and cut it up and chew it and swallow it, and it felt to me like the Stations of the Cross.<sup>4</sup>

[25] And one of the things that often gets lost in discussions of depression is that you know it's ridiculous. You know it's ridiculous while you're experiencing it. You know that most people manage to listen to their messages and eat lunch and organize themselves to take a shower and go out the front door and that it's not a big deal, and yet you are nonetheless in its grip and you are unable to figure out any way around it. And so I began to feel myself doing less and thinking less and feeling less. It was a kind of nullity.<sup>5</sup>

And then the anxiety set in. If you told me that I'd have to be depressed for the next month, I would say, "As long I know it'll be over in November, I can do it." But if you said to me, "You have to have acute anxiety for the next month," I would rather slit my wrist than go through it. It was the feeling all the time like that feeling you have if you're walking and you slip or trip and the ground is rushing up at you, but instead of lasting half a second, the way that does, it lasted for six months. It's a sensation of being afraid all the time but not even knowing what it is that you're afraid of. And it was at that point that I began to think that it was just too painful to be alive, and that the only reason not to kill oneself was so as not to hurt other people.

And finally one day, I woke up and I thought perhaps I'd had a stroke, because I lay in bed completely frozen, looking at the telephone, thinking, "Something is wrong and I should call for help," and I couldn't reach out my arm and pick up the phone and dial. And finally, after four full hours of my lying and staring at it, the phone rang, and somehow I managed to pick it up, and it was my father, and I said, "I'm in serious trouble. We need to do something."

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1. "I felt a Funeral, in my Brain" by Emily Dickinson
  2. most likely referring to Francisco Goya, a Spanish Romantic painter and printmaker
  3. **Vitality (noun):** the state of being strong and active
  4. a series of images depicting Jesus Christ on the day of his crucifixion
  5. a state or quality of feeling invalid or worthless

The next day I started with the medications and the therapy. And I also started reckoning with this terrible question: If I'm not the tough person who could have made it through a concentration camp, then who am I? And if I have to take medication, is that medication making me more fully myself, or is it making me someone else? And how do I feel about it if it's making me someone else?

I had two advantages as I went into the fight. The first is that I knew that, objectively speaking, I had a nice life, and that if I could only get well, there was something at the other end that was worth living for. And the other was that I had access to good treatment.

- [30] But I nonetheless emerged and relapsed, and emerged and relapsed, and emerged and relapsed, and finally understood I would have to be on medication and in therapy forever. And I thought, "But is it a chemical problem or a psychological problem? And does it need a chemical cure or a philosophical cure?" And I couldn't figure out which it was. And then I understood that actually, we aren't advanced enough in either area for it to explain things fully. The chemical cure and the psychological cure both have a role to play, and I also figured out that depression was something that was braided so deep into us that there was no separating it from our character and personality.

I want to say that the treatments we have for depression are appalling. They're not very effective. They're extremely costly. They come with innumerable side effects. They're a disaster. But I am so grateful that I live now and not 50 years ago, when there would have been almost nothing to be done. I hope that 50 years hence, people will hear about my treatments and be appalled that anyone endured such primitive science.

Depression is the flaw in love. If you were married to someone and thought, "Well, if my wife dies, I'll find another one," it wouldn't be love as we know it. There's no such thing as love without the anticipation of loss, and that specter of despair can be the engine of intimacy.

There are three things people tend to confuse: depression, grief and sadness. Grief is explicitly reactive. If you have a loss and you feel incredibly unhappy, and then, six months later, you are still deeply sad, but you're functioning a little better, it's probably grief, and it will probably ultimately resolve itself in some measure. If you experience a catastrophic loss, and you feel terrible, and six months later you can barely function at all, then it's probably a depression that was triggered by the catastrophic circumstances. The trajectory tells us a great deal. People think of depression as being just sadness. It's much, much too much sadness, much too much grief at far too slight a cause.

As I set out to understand depression, and to interview people who had experienced it, I found that there were people who seemed, on the surface, to have what sounded like relatively mild depression who were nonetheless utterly disabled by it. And there were other people who had what sounded as they described it like terribly severe depression who nonetheless had good lives in the interstices between their depressive episodes. And I set out to find out what it is that causes some people to be more resilient than other people. What are the mechanisms that allow people to survive? And I went out and I interviewed person after person who was suffering with depression.

- [35] One of the first people I interviewed described depression as a slower way of being dead, and that was a good thing for me to hear early on because it reminded me that that slow way of being dead can lead to actual deadness, that this is a serious business. It's the leading disability worldwide, and people die of it every day.

One of the people I talked to when I was trying to understand this was a beloved friend who I had known for many years, and who had had a psychotic episode in her freshman year of college, and then plummeted into a horrific depression. She had bipolar illness,<sup>6</sup> or manic depression, as it was then known. And then she did very well for many years on lithium,<sup>7</sup> and then eventually, she was taken off her lithium to see how she would do without it, and she had another psychosis, and then plunged into the worst depression that I had ever seen in which she sat in her parents' apartment, more or less catatonic,<sup>8</sup> essentially without moving, day after day after day. And when I interviewed her about that experience some years later — she's a poet and psychotherapist named Maggie Robbins — when I interviewed her, she said, "I was singing 'Where Have All The Flowers Gone,' over and over, to occupy my mind. I was singing to blot out the things my mind was saying, which were, 'You are nothing. You are nobody. You don't even deserve to live.' And that was when I really started thinking about killing myself."

You don't think in depression that you've put on a gray veil and are seeing the world through the haze of a bad mood. You think that the veil has been taken away, the veil of happiness, and that now you're seeing truly. It's easier to help schizophrenics<sup>9</sup> who perceive that there's something foreign inside of them that needs to be exorcised, but it's difficult with depressives, because we believe we are seeing the truth.

But the truth lies. I became obsessed with that sentence: "But the truth lies." And I discovered, as I talked to depressive people, that they have many delusional perceptions. People will say, "No one loves me." And you say, "I love you, your wife loves you, your mother loves you." You can answer that one pretty readily, at least for most people. But people who are depressed will also say, "No matter what we do, we're all just going to die in the end." Or they'll say, "There can be no true communion<sup>10</sup> between two human beings. Each of us is trapped in his own body." To which you have to say, "That's true, but I think we should focus right now on what to have for breakfast." (Laughter)

A lot of the time, what they are expressing is not illness, but insight, and one comes to think what's really extraordinary is that most of us know about those existential<sup>11</sup> questions and they don't distract us very much. There was a study I particularly liked in which a group of depressed and a group of non-depressed people were asked to play a video game for an hour, and at the end of the hour, they were asked how many little monsters they thought they had killed. The depressive group was usually accurate to within about 10 percent, and the non-depressed people guessed between 15 and 20 times as many little monsters — (Laughter) — as they had actually killed.

[40] A lot of people said, when I chose to write about my depression, that it must be very difficult to be out of that closet, to have people know. They said, "Do people talk to you differently?" I said, "Yes, people talk to me differently. They talk to me differently insofar as they start telling me about their experience, or their sister's experience, or their friend's experience. Things are different because now I know that depression is the family secret that everyone has.

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6. Bipolar disorder is a mental disorder marked by alternating periods of severe high and low moods.
  7. often used as a mood-stabilizing drug
  8. of or in an immobile or unresponsive stupor
  9. Schizophrenia is a mental disorder characterized by withdrawal from reality, illogical patterns of thinking, and hallucinations.
  10. the sharing or exchanging of intimate thoughts and feelings
  11. relating to existence



I went a few years ago to a conference, and on Friday of the three-day conference, one of the participants took me aside, and she said, "I suffer from depression and I'm a little embarrassed about it, but I've been taking this medication, and I just wanted to ask you what you think?" And so I did my best to give her such advice as I could. And then she said, "You know, my husband would never understand this. He's really the kind of guy to whom this wouldn't make any sense, so, you know, it's just between us." And I said, "Yes, that's fine." On Sunday of the same conference, her husband took me aside, — (Laughter) — and he said, "My wife wouldn't think that I was really much of a guy if she knew this, but I've been dealing with this depression and I'm taking some medication, and I wondered what you think?" They were hiding the same medication in two different places in the same bedroom. (Laughter)

And I said that I thought communication within the marriage might be triggering some of their problems. (Laughter)

But I was also struck by the burdensome nature of such mutual secrecy. Depression is so exhausting. It takes up so much of your time and energy, and silence about it, it really does make the depression worse.

And then I began thinking about all the ways people make themselves better. I'd started off as a medical conservative. I thought there were a few kinds of therapy that worked, it was clear what they were — there was medication, there were certain psychotherapies, there was possibly electroconvulsive treatment, and that everything else was nonsense. But then I discovered something. If you have brain cancer, and you say that standing on your head for 20 minutes every morning makes you feel better, it may make you feel better, but you still have brain cancer, and you'll still probably die from it. But if you say that you have depression, and standing on your head for 20 minutes every day makes you feel better, then it's worked, because depression is an illness of how you feel, and if you feel better, then you are effectively not depressed anymore. So I became much more tolerant of the vast world of alternative treatments.

[45] And I get letters, I get hundreds of letters from people writing to tell me about what's worked for them. Someone was asking me backstage today about meditation. My favorite of the letters that I got was the one that came from a woman who wrote and said that she had tried therapy, medication, she had tried pretty much everything, and she had found a solution and hoped I would tell the world, and that was making little things from yarn. (Laughter)

She sent me some of them. (Laughter)

And I'm not wearing them right now. (Laughter)

I suggested to her that she also should look up obsessive compulsive disorder<sup>12</sup> in the DSM.<sup>13</sup>

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12. a mental disorder in which people have unwanted and repeated thoughts, feelings, ideas, and behaviors that drive them to do something over and over

13. The Diagnostic and Statistical Manual of Mental Disorders is a comprehensive classification of officially recognized psychiatric disorders.

And yet, when I went to look at alternative treatments, I also gained perspective on other treatments. I went through a tribal exorcism in Senegal that involved a great deal of ram's blood and that I'm not going to detail right now, but a few years afterwards I was in Rwanda, working on a different project, and I happened to describe my experience to someone, and he said, "Well, that's West Africa, and we're in East Africa, and our rituals are in some ways very different, but we do have some rituals that have something in common with what you're describing." And he said, "But we've had a lot of trouble with Western mental health workers, especially the ones who came right after the genocide." I said, "What kind of trouble did you have?" And he said, "Well, they would do this bizarre thing. They didn't take people out in the sunshine where you begin to feel better. They didn't include drumming or music to get people's blood going. They didn't involve the whole community. They didn't externalize the depression as an invasive spirit. Instead what they did was they took people one at a time into dingy little rooms and had them talk for an hour about bad things that had happened to them." (Laughter) (Applause)

[50] He said, "We had to ask them to leave the country." (Laughter)

Now at the other end of alternative treatments, let me tell you about Frank Russakoff. Frank Russakoff had the worst depression perhaps that I've ever seen in a man. He was constantly depressed. He was, when I met him, at a point at which every month, he would have electroshock treatment.<sup>14</sup> Then he would feel sort of disoriented for a week. Then he would feel okay for a week. Then he would have a week of going downhill. And then he would have another electroshock treatment. And he said to me when I met him, "It's unbearable to go through my weeks this way. I can't go on this way, and I've figured out how I'm going to end it if I don't get better." "But," he said to me, "I heard about a protocol at Mass General for a procedure called a cingulotomy, which is a brain surgery, and I think I'm going to give that a try." And I remember being amazed at that point to think that someone who clearly had so many bad experiences with so many different treatments still had buried in him, somewhere, enough optimism to reach out for one more. And he had the cingulotomy, and it was incredibly successful.

He's now a friend of mine. He has a lovely wife and two beautiful children. He wrote me a letter the Christmas after the surgery, and he said, "My father sent me two presents this year. First, a motorized CD rack from The Sharper Image that I didn't really need, but I knew he was giving it to me to celebrate the fact that I'm living on my own and have a job I seem to love. And the other present was a photo of my grandmother, who committed suicide. As I unwrapped it, I began to cry, and my mother came over and said, 'Are you crying because of the relatives you never knew?' And I said, 'She had the same disease I have.' I'm crying now as I write to you. It's not that I'm so sad, but I get overwhelmed, I think, because I could have killed myself, but my parents kept me going, and so did the doctors, and I had the surgery. I'm alive and grateful. We live in the right time, even if it doesn't always feel like it."

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14. a procedure in which small electric currents are passed through the brain to change the brain's chemistry and reverse symptoms of certain mental illnesses

I was struck by the fact that depression is broadly perceived to be a modern, Western, middle-class thing, and I went to look at how it operated in a variety of other contexts, and one of the things I was most interested in was depression among the indigent.<sup>15</sup> And so I went out to try to look at what was being done for poor people with depression. And what I discovered is that poor people are mostly not being treated for depression. Depression is the result of a genetic vulnerability, which is presumably evenly distributed in the population, and triggering circumstances, which are likely to be more severe for people who are impoverished. And yet it turns out that if you have a really lovely life but feel miserable all the time, you think, "Why do I feel like this? I must have depression." And you set out to find treatment for it. But if you have a perfectly awful life, and you feel miserable all the time, the way you feel is commensurate with your life, and it doesn't occur to you to think, "Maybe this is treatable."

And so we have an epidemic in this country of depression among impoverished people that's not being picked up and that's not being treated and that's not being addressed, and it's a tragedy of a grand order. And so I found an academic who was doing a research project in slums outside of D.C., where she picked up women who had come in for other health problems and diagnosed them with depression, and then provided six months of the experimental protocol. One of them, Lolly, came in, and this is what she said the day she came in. She said, and she was a woman, by the way, who had seven children. She said, "I used to have a job but I had to give it up because I couldn't go out of the house. I have nothing to say to my children. In the morning, I can't wait for them to leave, and then I climb in bed and pull the covers over my head, and three o'clock when they come home, it just comes so fast." She said, "I've been taking a lot of Tylenol, anything I can take so that I can sleep more. My husband has been telling me I'm stupid, I'm ugly. I wish I could stop the pain."

[55] Well, she was brought into this experimental protocol, and when I interviewed her six months later, she had taken a job working in childcare for the U.S. Navy, she had left the abusive husband, and she said to me, "My kids are so much happier now." She said, "There's one room in my new place for the boys and one room for the girls, but at night, they're just all up on my bed, and we're doing homework all together and everything. One of them wants to be a preacher, one of them wants to be a firefighter, and one of the girls says she's going to be a lawyer. They don't cry like they used to, and they don't fight like they did. That's all I need now, is my kids. Things keep on changing, the way I dress, the way I feel, the way I act. I can go outside not being afraid anymore, and I don't think those bad feelings are coming back, and if it weren't for Dr. Miranda and that, I would still be at home with the covers pulled over my head, if I were still alive at all. I asked the Lord to send me an angel, and He heard my prayers."

I was really moved by these experiences, and I decided that I wanted to write about them not only in a book I was working on, but also in an article, and I got a commission from The New York Times Magazine to write about depression among the indigent.

And I turned in my story, and my editor called me and said, "We really can't publish this."

And I said, "Why not?"

And she said, "It just is too far-fetched. These people who are sort of at the very bottom rung of society and then they get a few months of treatment and they're virtually ready to run Morgan Stanley?"<sup>16</sup> It's just too implausible." She said, "I've never even heard of anything like it."

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15. **Indigent** (*adjective*): suffering from extreme poverty

16. a global financial services firm

[60] And I said, "The fact that you've never heard of it is an indication that it is news." (Laughter) (Applause)

"And you are a news magazine."

So after a certain amount of negotiation, they agreed to it. But I think a lot of what they said was connected in some strange way to this distaste that people still have for the idea of treatment, the notion that somehow if we went out and treated a lot of people in indigent communities, that would be exploitative, because we would be changing them. There is this false moral imperative that seems to be all around us, that treatment of depression, the medications and so on, are an artifice,<sup>17</sup> and that it's not natural. And I think that's very misguided. It would be natural for people's teeth to fall out, but there is nobody militating<sup>18</sup> against toothpaste, at least not in my circles.

People then say, "But isn't depression part of what people are supposed to experience? Didn't we evolve to have depression? Isn't it part of your personality?" To which I would say, mood is adaptive. Being able to have sadness and fear and joy and pleasure and all of the other moods that we have, that's incredibly valuable. And major depression is something that happens when that system gets broken. It's maladaptive.

People will come to me and say, "I think, though, if I just stick it out for another year, I think I can just get through this."

[65] And I always say to them, "You may get through it, but you'll never be 37 again. Life is short, and that's a whole year you're talking about giving up. Think it through."

It's a strange poverty of the English language, and indeed of many other languages, that we use this same word, depression, to describe how a kid feels when it rains on his birthday, and to describe how somebody feels the minute before they commit suicide.

People say to me, "Well, is it continuous with normal sadness?" And I say, in a way it's continuous with normal sadness. There is a certain amount of continuity, but it's the same way there's continuity between having an iron fence outside your house that gets a little rust spot that you have to sand off and do a little repainting, and what happens if you leave the house for 100 years and it rusts through until it's only a pile of orange dust. And it's that orange dust spot, that orange dust problem, that's the one we're setting out to address.

So now people say, "You take these happy pills, and do you feel happy?" And I don't. But I don't feel sad about having to eat lunch, and I don't feel sad about my answering machine, and I don't feel sad about taking a shower. I feel more, in fact, I think, because I can feel sadness without nullity. I feel sad about professional disappointments, about damaged relationships, about global warming. Those are the things that I feel sad about now. And I said to myself, well, what is the conclusion? How did those people who have better lives even with bigger depression manage to get through? What is the mechanism of resilience?

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17. clever or cunning devices, especially as used to trick or deceive others

18. to be a powerful factor in preventing something

And what I came up with over time was that the people who deny their experience, and say, "I was depressed a long time ago, I never want to think about it again, I'm not going to look at it and I'm just going to get on with my life," ironically, those are the people who are most enslaved by what they have. Shutting out the depression strengthens it. While you hide from it, it grows. And the people who do better are the ones who are able to tolerate the fact that they have this condition. Those who can tolerate their depression are the ones who achieve resilience.

[70] So Frank Russakoff said to me, "If I had a do-over, I suppose I wouldn't do it this way, but in a strange way, I'm grateful for what I've experienced. I'm glad to have been in the hospital 40 times. It taught me so much about love, and my relationship with my parents and my doctors has been so precious to me, and will be always."

And Maggie Robbins said, "I used to volunteer in an AIDS clinic, and I would just talk and talk and talk, and the people I was dealing with weren't very responsive, and I thought, 'That's not very friendly or helpful of them.'" (Laughter) "And then I realized, I realized that they weren't going to do more than make those first few minutes of small talk. It was simply going to be an occasion where I didn't have AIDS and I wasn't dying, but could tolerate the fact that they did and they were. Our needs are our greatest assets. It turns out I've learned to give all the things I need."

Valuing one's depression does not prevent a relapse, but it may make the prospect of relapse and even relapse itself easier to tolerate. The question is not so much of finding great meaning and deciding your depression has been very meaningful. It's of seeking that meaning and thinking, when it comes again, "This will be hellish, but I will learn something from it." I have learned in my own depression how big an emotion can be, how it can be more real than facts, and I have found that that experience has allowed me to experience positive emotion in a more intense and more focused way. The opposite of depression is not happiness, but vitality, and these days, my life is vital, even on the days when I'm sad. I felt that funeral in my brain, and I sat next to the colossus<sup>19</sup> at the edge of the world, and I have discovered something inside of myself that I would have to call a soul that I had never formulated until that day 20 years ago when hell came to pay me a surprise visit.

I think that while I hated being depressed and would hate to be depressed again, I've found a way to love my depression. I love it because it has forced me to find and cling to joy. I love it because each day I decide, sometimes gamely,<sup>20</sup> and sometimes against the moment's reason, to cleave to the reasons for living. And that, I think, is a highly privileged rapture.<sup>21</sup> Thank you. (Applause) Thank you. (Applause)

*"Depression, The Secret We Share" from TEDxMet by Andrew Solomon. Copyright © 2013 by TED. This text is licensed under CC BY-NC-ND 4.0.*

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19. a person or thing of immense size or power

20. to do something in a brave or spirited way

21. a state or experience of being carried away by overwhelming emotion

## Text-Dependent Questions

**Directions:** For the following questions, choose the best answer or respond in complete sentences.

1. PART A: Which of the following identifies Andrew Solomon's main claim in the speech?
  - A. Depression is often not openly discussed because it is an uncommon mental illness, and usually too mild to recognize or treat.
  - B. People do not openly talk about their depression or seek treatment because it has often been viewed as embarrassing.
  - C. It is difficult to seek treatment for depression, as it is viewed as a glorified form of sadness rather than a serious mental illness.
  - D. Depression is overwhelmingly experienced by wealthy people who feel dissatisfied despite having good lives.
  
2. PART B: Which detail from the text best identifies the central idea of the text?
  - A. "I want to say that the treatments we have for depression are appalling. They're not very effective. They're extremely costly. They come with innumerable side effects." (Paragraph 12)
  - B. "People think of depression as being just sadness. It's much, much too much sadness, much too much grief at far too slight a cause." (Paragraph 14)
  - C. "They talk to me differently insofar as they start telling me about their experience, or their sister's experience, or their friend's experience. Things are different because now I know that depression is the family secret that everyone has." (Paragraph 21)
  - D. "I was struck by the fact that depression is broadly perceived to be a modern, Western, middle-class thing, and I went to look at how it operated in a variety of other contexts," (Paragraph 34)
  
3. How does including Emily Dickinson's poem at the beginning of the speech support Solomon's claims about depression?
  - A. It emphasizes how deadly depression is to those who suffer from it.
  - B. It shows how all-consuming the experience of depression can be.
  - C. It stresses the positive experiences a person can take away from their depression.
  - D. It highlights how depression is highly personal and often misunderstood.
  
4. PART A: How does Solomon's discussion of the husband and wife in paragraph 22 contribute to his depiction of depression?
  - A. It shows how reluctant people are to be open about their depression.
  - B. It emphasizes the large number of people who suffer from depression.
  - C. It proves that depression can be triggered and amplified by unlikely things.
  - D. It stresses how successful treating depression with medication can be.

5. PART B: Which quote from the text best supports the answer to Part A?
- A. "You know, my husband would never understand this. He's really the kind of guy to whom this wouldn't make any sense" (Paragraph 22)
  - B. "My wife wouldn't think that I was really much of a guy if she knew this, but I've been dealing with this depression and I'm taking some medication" (Paragraph 22)
  - C. "And I said that I thought communication within the marriage might be triggering some of their problems." (Paragraph 23)
  - D. "But I was also struck by the burdensome nature of such mutual secrecy. Depression is so exhausting." (Paragraph 24)
6. PART A: How does Solomon argue against the idea that depression is a middle-class phenomenon?
- A. He provides examples of people who suffer from depression from various backgrounds.
  - B. He proves that depression is actually more common among lower income individuals.
  - C. He provides examples in which middle-class people do not suffer from depression.
  - D. He explains how middle class people often don't have difficult experiences that trigger depression.
7. PART B: Which section from the text best supports the answer to Part A?
- A. "And I remember being amazed at that point to think that someone who clearly had so many bad experiences with so many different treatments still had buried in him, somewhere, enough optimism to reach out for one more." (Paragraph 32)
  - B. "And yet it turns out that if you have a really lovely life but feel miserable all the time, you think, 'Why do I feel like this? I must have depression.'" (Paragraph 34)
  - C. "Depression is the result of a genetic vulnerability, which is presumably evenly distributed in the population, and triggering circumstances, which are likely to be more severe for people who are impoverished." (Paragraph 34)
  - D. "And so we have an epidemic in this country of depression among impoverished people that's not being picked up and that's not being treated and that's not being addressed," (Paragraph 35)
8. How does Solomon distinguish between grief and depression?
- A. Grief has been identified as the early signs of an impending depression.
  - B. Grief is felt in reaction to something, while depression is usually felt for an extended period of time with little improvement.
  - C. Grief and depression are both reactions to a serious loss or tragedy.
  - D. Grief is only experienced in the wake of loss, while depression can be triggered by anything.

9. How does Solomon use the image of a veil to explore the thought processes of people with and without depression (Paragraph 18)?

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10. How does Solomon support his claim that the people who accept their depression are the most resilient in overcoming it?

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## Discussion Questions

**Directions:** *Brainstorm your answers to the following questions in the space provided. Be prepared to share your original ideas in a class discussion.*

1. How does Solomon use humor in his TED Talk? What is your reaction to his use of humor? Are his jokes funny, or are they inappropriate?
2. In the context of the text, what does it mean to feel alone? How does Solomon explore ways in which depression isolates those who suffer from it? How does this affect their ability to access treatment?
3. In the context of the text, what can we learn from tragedy? What did experiencing depression teach Andrew Solomon? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.
4. In the context of the text, how does a person overcome adversity? How does Andrew Solomon describe those who suffered from depression overcoming it? Cite evidence from this text, your own experience, and other literature, art, or history in your answer.

# Algebra 1, 2 & Math 4

Name: \_\_\_\_\_

Class: \_\_\_\_\_

## How Is My Driving?

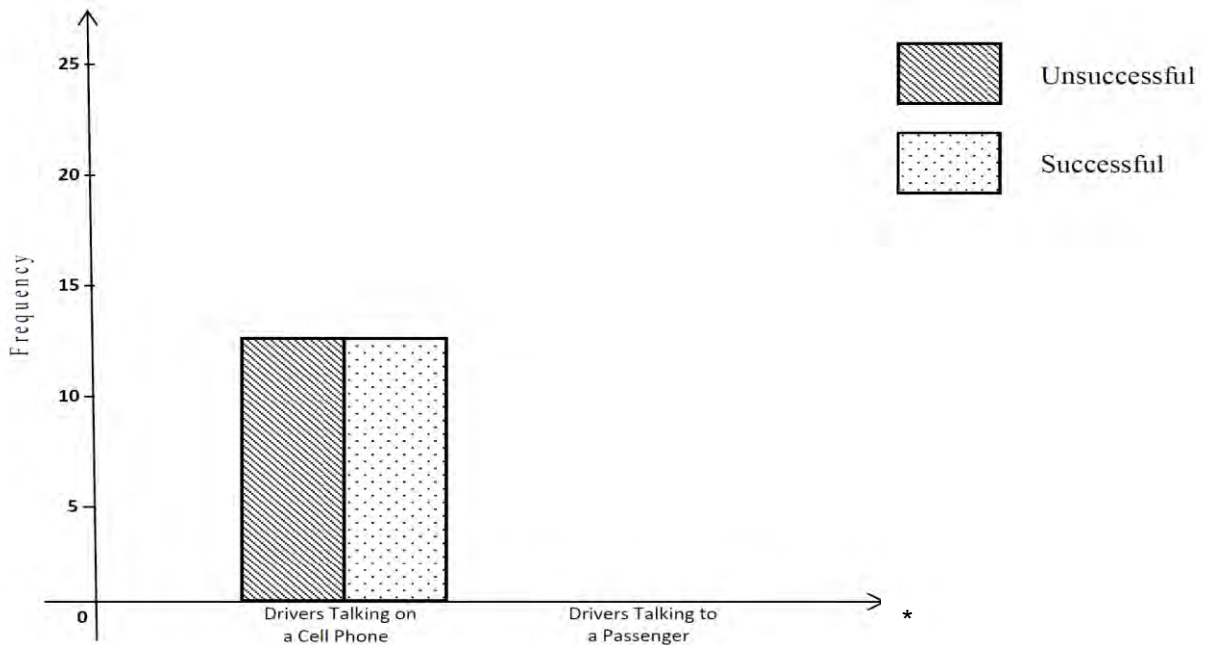
California, Connecticut, New Jersey, New York, and Washington have enacted laws that make talking on a cell phone illegal while driving. Based on several experiments, researchers have concluded that people who talk on their cell phones while driving are prone to have more collisions because of a lack of attention to traffic conditions.

In a particular experiment to test the effects of talking on a cell phone, 52 people, 26 males and 26 females, were randomly assigned to two driving simulators. In one simulator the drivers talked on a cell phone. In the other simulator the drivers talked to a passenger. The simulators set up basic navigational tasks, such as changing lanes, exiting at a rest area, and maintaining an appropriate speed. The results of successfully completing the tasks were recorded. Thirteen of the 26 drivers were unsuccessful with basic driving tasks while talking on their cell phone while only 3 out of 26 drivers who were talking with passengers did not successfully complete these basic tasks.\*

- Complete the following table using the data from the experiment.

	Talking on Cell Phone	Talking to a Passenger	Total
<b>Successful at Navigational Tasks</b>			
<b>Unsuccessful at Navigational Tasks</b>			
<b>Total</b>			

- Complete the bar graph that compares the counts of the drivers who completed the tasks to the counts of the drivers who did not for both groups, talking on a cell phone and talking to a passenger. The graph displays the data for the drivers talking on a cell phone. Construct the bars for the drivers who were talking to a passenger. Title your graph.



3. Answer the following probability questions based on the chart and the double bar graph.
- a) What is the probability that a randomly selected driver was successful in completing basic driving tasks?
  
  - b) What is the probability that a randomly selected driver was unsuccessful in completing basic driving tasks?
  
  - c) What is the probability that a randomly selected driver was unsuccessful while talking on a cell phone?
  
  - d) What is the probability that a randomly selected driver was unsuccessful while talking to a passenger?
  
  - e) What is the difference between the probability a driver failed to navigate appropriately while talking on a cell phone and the probability a driver failed while talking to a passenger? Interpret the significance of this difference in the context of the situation.
  
  - f) If a randomly selected driver is talking on a cell phone, what is the probability that he/she will be unsuccessful?

In statistics, a hypothesis is used to propose a model based on data. The researchers' hypothesis was that drivers are more distracted while talking on a cell phone than when talking to a passenger. Through our simulation, we are going to determine if our data is consistent with the model. The purpose of this simulation is to determine whether or not there is enough evidence to support the findings of the research. We are not trying to prove or disprove the results. Through simulation, we are trying to model the situation to determine what happens over the long run. In order to perform the simulation, we must assume that the drivers who were unsuccessful in completing the basic driving tasks would be distracted whether they were talking on the phone or talking to a passenger.

4. Do you agree with this “hypothesis” or do you think the proportion of drivers who did not successfully complete a navigational task will be the same for either distraction? Explain your answer.
  
5. We are going to model the situation using a deck of cards.\*
  - a) How many cards should we use to simulate the number of drivers who did not successfully complete navigational tasks?
  
  - b) How many cards do we need to represent the drivers who successfully completed navigational tasks?
  
  - c) Let the face value cards (Jack, Queen, King & Ace) represent the drivers who were unsuccessful in performing basic navigational tasks. With this consideration are we achieving our goals described in 5(a) and 5(b), explain?
  
6. Conduct the simulation working with a partner (One of your family members), using a standard deck of cards (remove any joker(s) that came with the pack). If you don't have a deck of cards handy, visit <https://www.random.org/playing-cards/> and do the necessary adjustments there to complete this part of the assignment.\*
  - Deal two stacks of 26 cards.
  - The cards the dealer receives will represent the cell phone users.
  - The cards the partner receives will represent the drivers who are talking to a passenger.
  - Record the number of drivers who were unsuccessful in each group in the following table.
  - Repeat this process a total of 5 times without changing dealers.

<b>Trial</b>	<b>Number of drivers</b>	<b>Number of drivers distracted by talking on the cell phone</b>	<b>Number of drivers distracted by talking to a passenger</b>
1	52		
2	52		
3	52		
4	52		
5	52		
<b>Total</b>			

7. Answer the following probability questions based on your five simulations.
- What is the probability that a randomly selected driver is unsuccessful in completing basic driving tasks while talking on the cell phone? Compare this answer to your answer in question 3c.
  - What is the probability that a randomly selected driver was distracted by talking to a passenger? Compare this answer to your answer in question 3d.
  - If a randomly selected driver is talking on a cell phone, what is the probability that he/she is unsuccessful in completing basic driving tasks? Compare this answer to your answer in question 3f.
8. Below is the data from a group of students from one of the High Schools in your District. Combine your data from Q.6 to find the Total frequency using the values in third column of Q.6 data.\*

**Drivers Distracted while Talking on a Cell Phone**

<b>Number of Drivers who failed while talking on Cell Phone</b>	<b>Frequency</b> (From existing data)	<b>Your data from Q.6</b> (Use the information in 3 <sup>rd</sup> column to fill this in)	<b>TOTAL Frequency</b> (Add Column 2 & 3 of this table)
0	0		
1	0		
2	1		
3	4		
4	2		
5	15		
6	18		
7	22		
8	16		
9	6		
10	7		
11	1		
12	2		
13	1		
14	0		
15	0		
16	0		
<b>TOTAL</b>	<b>95</b>		

9. Answer the following questions using the data you have completed in Q.8.\*

a) How many trials resulted in 13 drivers who failed to drive safely while talking on the phone? What percent of the data does this represent?

b) What is the mean number of drivers who were unsuccessful in completing navigational tasks while talking on the cell phone?

*[Hint: Mean =  $\frac{\sum fx}{\sum f}$ ,  $x$  = unsuccessful drivers while on cell phone (1<sup>st</sup> column in Q.8),  $f$  = total frequency (last column in Q.8)]*

c) How does the mean you found above compare to the research data (13 unsuccessful drivers while talking on a cell phone)? Explain the difference between these two numbers in the context of the situation.

d) Do you think the difference between these two values is significant enough to challenge the results of the research? Explain your reasoning.

e) Could there be other reasons why the drivers might not successfully complete the driving tasks other than talking on a cell phone or talking to a passenger while driving that could account for this behavior? If so, list at least two examples.

10. The school newspaper has asked you to write an article about the dangers of driving while talking on a cell phone and to a passenger. Write a paragraph summarizing your findings from the simulation.

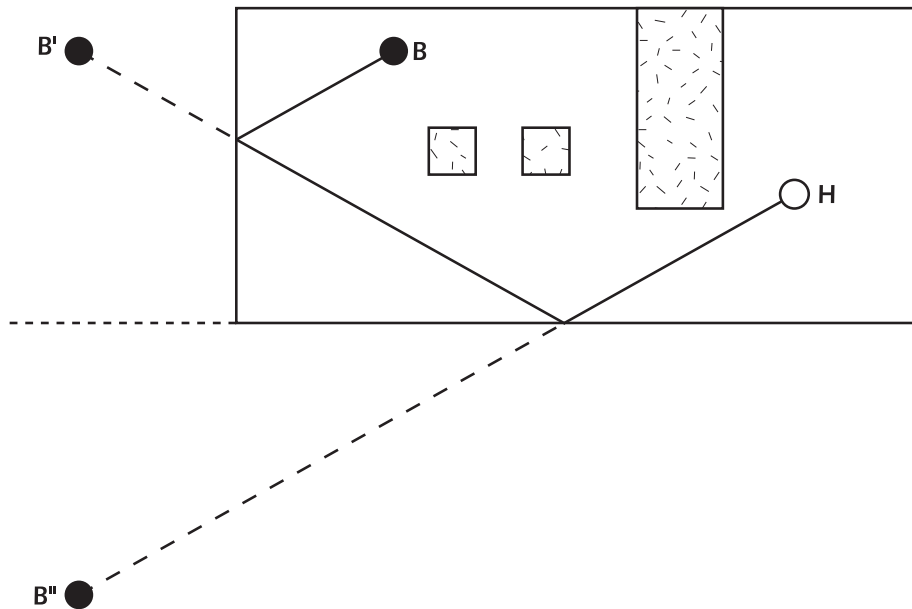
\*Parts of the original document has been modified to adopt for distance learning.

# Reflection Hoop

You are to design one or more golf holes for a miniature golf course. Show each drawing on a separate sheet of paper. The following stipulations apply:

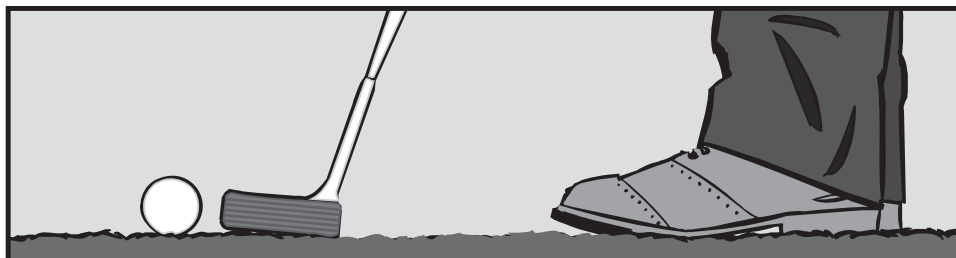
1. Each hole will require at least the designated number of banks from the tee to the hole.
2. You are to show the path of the ball with a solid line, the projection of the path outside the course will be designated by a dotted line.
3. Show each reflection of the ball, designated by B, B', B'' etc.
4. Use dashed lines to show wall extensions.
5. Show your obstacles - these will necessitate the banks.
6. Have fun by coloring your course.

For example:



## NOTES ON GRADING

To receive at least a C on the project you must successfully complete one hole, Hole #1, which requires one bank. A grade of B will be given for a second hole, Hole #2, which requires two banks (in addition to the first hole). For an A, you must also complete a third hole, Hole #3, which requires three banks (in addition to the first two). Extra credit will be given for designing a fourth hole, Hole #4, requiring more than three banks.

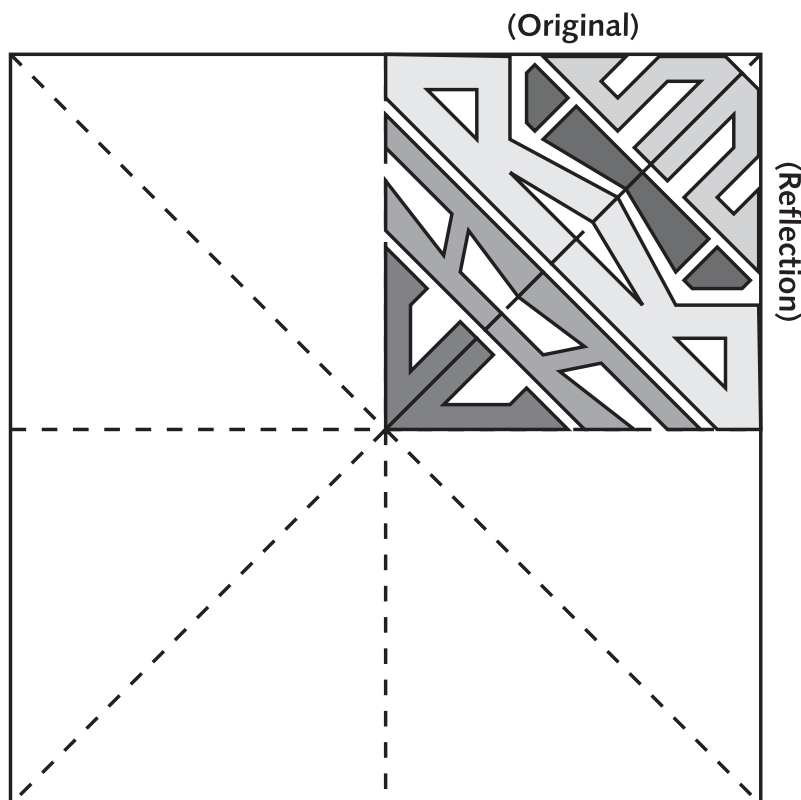


# Kaleidoscope

Design a kaleidoscope image using your first name and its transformations.

1. Begin with a square sheet of paper (trim an 8.5" x 11" to a square). Create a fold along the paper horizontally, vertically, and along each diagonal, so that eight triangular regions are formed.
2. In one of the regions, place an artistic rendition of your first name. Use some kind of block or puffy letters so that your name fills the entire region, and the borders of the letters actually touch the borders of the region.
3. Then reflect your letters through one of the folds to fill the next region. (see diagram below). Continue to do this all the way around the page until all regions are full. Keep the color scheme of each letter consistent throughout the design. (e.g. "C" below is orange through the design, while "H" is always green.)
4. On the backside of the original region, write the word "original." On the backside of the first reflected region, write the word "reflection." On the back of each of the other regions, write whether that region is a reflection, translation, rotation, or glide reflection in regards to the original.

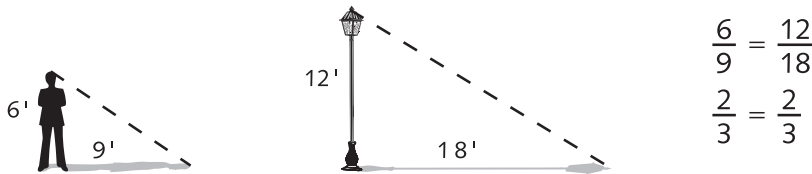
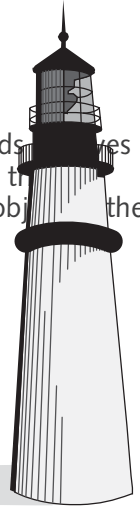
For example:





# HOW HIGH? Beyond a Shadow of a Doubt

There are several methods to mathematically determine the height of an object. One of those methods is measuring the object's shadow. It is assumed that the sun's rays strike the earth in parallel, forming a triangle with the ray, the object's height and its shadow. Any such triangle will be similar to that of another object at the same location, as shown in the diagram below.



Test this principle of similar triangles among objects with an object that has a height that you can actually measure (short object). Compare the ratio of your height to your shadow (or partner in the group) to the ratio of the object's height to the object's shadow. If these ratios are equal, then measure the shadow of three other objects and estimate their heights by using your new found ratio. Record your measurements and calculations to the chart below.

	Object	Your Height	Your Shadow	Object's Shadow	Object's Height
1					
2					
3					
4					

In the space provided for each object, draw and label the pair of similar triangles and corresponding proportion that you used to calculate the height of the object. Show your calculations.

**Object #1**  
(small object)

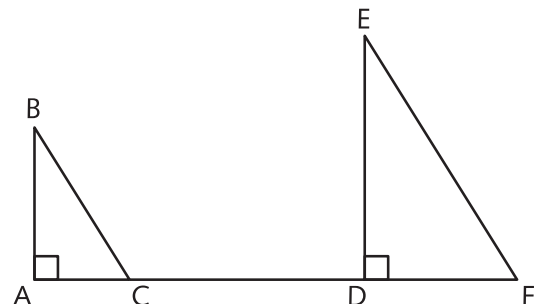
**Object #2**

**Object #3**

**Object #4**

Prove geometrically that these triangles will indeed be similar, given that the sun's rays are parallel.

Given:  $BC \parallel EF$   
 $BA \perp AF, ED \perp AF$   
 Prove:  $\triangle ABC \sim \triangle DEF$



# Exploring Energy Week 2 Project Overview

Last week you read information about the five different types of Renewable Energy. For each, you completed a simple graphic organizer about the Benefits and Drawbacks regarding Environmental, Social Cultural and Economic Factors. Of the Five Different types of Energy Sources, which one do you consider as the most efficient/interesting type of energy? \_\_\_\_\_

**YOU SHOULD DO THIS FIRST!** → You will need to research the renewable energy you selected on your own using the readings from last week, the additional review on page 3 in this packet and any online resources (be sure to cite your research resources) and complete the **Organizing Your Information** found on page 5 of the packet. **See page 4 for suggested links to resources and remember to connect with your science teacher for additional support.**

Now that **YOU ARE AN EXPERT ON THE \_\_\_\_\_ ENERGY SOURCE**, you have been chosen to be the process engineer for a resort community on Cinnabar Island, a newly discovered island on a lake near your city. **Cinnabar Island has:**

1. 75 single family homes to accommodate family sizes of 2-8 people.	5. Community shopping area
2. 50 townhomes to accommodate family sizes from 1-4 people.	6. Industrial area
3. 150 apartments.	7. Office park
4. Basic services- medical center, city hall, courthouse, Police and a Fire Station.	8. Park area(s) with natural areas and ball fields
	9. An elementary, middle, and high school
	10. A transportation system

**AFTER COMPLETING THE ORGANIZER!** → You are to **propose a power source for some or all of Cinnabar Island** using your chosen resource. You will create a presentation or model to propose this to the city officials.

**You can choose from the following your Presentation Product :**

- Powerpoint/Google Slides Presentation
  - No sentences only Bullets.
  - Each slide should not have more than 20 words
  - Include applicable drawings, images or diagrams
- Poster (Handwritten and Hand drawn or digital in Powerpoint or Publisher) or Infographic (can be created for free at [www.piktochart.com](http://www.piktochart.com) or [www.venngage.com](http://www.venngage.com) )
  - Clear large text or font
  - Include drawings, images or diagrams
- Brochure (Hand drawn or done in Word, Google Docs or Publisher)
  - Well-organized and neat with applicable graphics
- 3D Model of one of the following:
  - Dioramas of the selected energy sources with important components
  - Completion or redesign of the solar oven (included in the packet on page 7-8)
  - A Water or Wind turbine (look at <http://tiny.cc/r8s1nz> for some ideas)
  - Your resort town with your power source

**Project Overview Continued on Page 2→**

**Your Project should include the following regarding the renewable energy source you are proposing:**

- Definition of the renewable energy source (What is it? Where did it come from?)
- Explanation of why the energy source was chosen
- Historical Aspect
- How do they produce electricity/energy? How do they work?
- Pros and Cons of each (What are the benefits? What are the drawbacks?)
- Environmental Impact
- Costs involved (building, cost per watt)
- Any debates going on, political stuff, etc...
- Recent innovations
- Be sure to include in your presentation a detailed explanation to why your energy source would be a good source to generate electricity for the Cinnabar Island.
- If you submit a model you will need to include a description of your model components, function, etc...You can submit a video of your model in action.

You will also submit your Organizing Your Information sheet with your project!

Be sure to carefully review the **Exploring Energy Week 2 Rubric** to ensure you are including all of the required information and materials! You can find the rubric on Page 6.

**\*\* Submission: Check with your teacher on how to share your final document or for any concerns. \*\***

**Overview Summary- What you will submit to your teacher!**

1. Completed Organizing you Information organizer (again refer to the rubric for clarification and to make certain you are covering all the material!
2. Your final project (from the list on page 1). *There will be lots of digital resources available on the CMSD Enrichment page, and you should reach out to your science teachers for any additional information or support!*

**Enjoy becoming a renewable energy expert and creating something meaningful to solve this problem!**

## **Exploring Energy Resources Research Review**

Reliance on fossil fuels presents a problem. Fossil fuels are a finite resource. Eventually, the world will run out of fossil fuels, or it will become too expensive to retrieve those that remain. Fossil fuels cause air, water and soil pollution, and produce greenhouse gases that contribute to global warming.

Renewable energy resources offer cleaner alternatives to fossil fuels. They are not completely problem-free, but they produce much less pollution and fewer greenhouse gases, and, will not run out. About 14 percent of the world's energy comes from renewable energy sources, of which 10 percent is from biomass. Here are our main sources of renewable energy.

**Biomass:** Biomass has been an important source of energy since people began burning wood for cooking and heating. Wood is the most common, but other sources include food crops, grasses and other plants, agricultural and forestry waste and residue, organic components from municipal and industrial wastes, even methane gas harvested from landfills. Biomass is used to produce electricity, fuel for transportation, and to manufacture products. It can be converted to alcohol or used to generate methane. Solid waste is burned to reduce the volume and to supply energy. The use of biomass energy in less-developed areas can contribute to habitat and biodiversity loss and an increase in air pollution because the fuel is often burned over open fires.

**Hydroelectric:** Water is constantly recharged by the global cycle of evaporation and precipitation. Heat of the sun causes water in lakes and oceans to evaporate and form clouds. Water falls back to Earth as rain or snow and drains into rivers and streams that flow back to the ocean. Flowing water can be used to power water wheels that drive mechanical processes. Energy is captured by turbines and generators and used to generate electricity. Tiny turbines can be used to power single homes.

Hydroelectric power provides about 16 percent of the world's electricity. Its development requires flooding areas and may require the displacement of people. Other environmental effects of developing hydroelectric plants are altering aquatic habitats and altering stream flow.

**Solar energy:** Sunlight, or solar energy, can be used for heating, lighting and cooling homes and other buildings, generating electricity, water heating, and a variety of industrial processes. The technology used to harvest the sun's energy is constantly evolving, including water-heating rooftop pipes, photo-voltaic cells, and mirror arrays. Rooftop panels are not intrusive, but large arrays on the ground can compete with wildlife habitat.

Solar energy can be collected and used in either passive or active heating systems and can be used to generate electricity in two different ways. Mirrors can be used to concentrate sunlight to produce steam, which can be used to power a turbine. Photovoltaic cells can be used to produce electricity. Lack of a constant supply of sunlight is solar energy's primary limitation.

**Wind power:** Wind is the movement of air that occurs when warm air rises and cooler air rushes in to replace it. The energy of the wind has been used for centuries to sail ships and drive windmills that grind grain. Today, wind energy is captured by wind turbines and used to generate electricity. Issues periodically arise about where turbines are installed, as they can be problematic for migrating birds and bats. It may require wide, open areas and many wind generators.

**Geothermal:** The heat inside the Earth produces steam and hot water that can be used to power generators and produce electricity, or for other applications such as home heating and power generation for industry. Geothermal energy can be drawn from deep underground reservoirs by drilling, or from other geothermal reservoirs closer to the surface. This application is increasingly used to offset heating and cooling costs in residential and commercial buildings. The use of geothermal is determined by specific geologic and geographic features of the land, limiting the use of these sources of energy.

## Online Resources

<b>Resources: General Resources</b>			
Wisconsin K-12 Energy Education Fact Sheets		Nat Geo: Renewable Energy 101 (Youtube)	
<a href="http://bit.ly/2KIPCuh">bit.ly/2KIPCuh</a>		<a href="http://bit.ly/2Seztkj">bit.ly/2Seztkj</a>	
<b>Resources: Solar Energy</b>			
Khan Academy: Solar Power		The History of Solar Energy	
<a href="http://bit.ly/2VMoot6">bit.ly/2VMoot6</a>		<a href="http://bit.ly/2KFtfG8">bit.ly/2KFtfG8</a>	
<b>Resources: Geothermal Energy</b>			
Energy 101: Geothermal Energy (Youtube)		History of Geothermal Energy	
<a href="http://bit.ly/2y17EW6">bit.ly/2y17EW6</a>		<a href="http://bit.ly/3d3tSFP">bit.ly/3d3tSFP</a>	
<b>Resources: Hydroelectric Energy</b>			
Northfield Mountain It All Begins with Rain (Youtube)		History of Hydropower	
<a href="http://bit.ly/2xXJ1cR">bit.ly/2xXJ1cR</a>		<a href="http://bit.ly/3aSQilo">bit.ly/3aSQilo</a>	
<b>Resources: Wind Energy</b>			
Khan Academy Wind Power (Youtube)		History of Wind Energy	
<a href="http://bit.ly/2zECowl">bit.ly/2zECowl</a>		<a href="http://bit.ly/2KKPII3">bit.ly/2KKPII3</a>	
<b>Resources: Biomass Energy</b>			
Green Mountain Energy: Renewable Biomass Energy (Video)		Department of Energy: Virtual Science Fair Biomass history poster	
<a href="http://bit.ly/35nmpic">bit.ly/35nmpic</a>		<a href="http://bit.ly/2VM4Q82">bit.ly/2VM4Q82</a>	
<b>Resources: Renewable Energy models</b>			
Re-Energy: Build a HydroGenerator (Instructions)		Re-Energy: Build a Wind Turbine (Instructions and Video)	
<a href="http://bit.ly/3bOHKU5">bit.ly/3bOHKU5</a>		<a href="http://bit.ly/2WcqDVp">bit.ly/2WcqDVp</a>	
Solarcooking.org Build a solar cooker (Instructions)		Energy.gov Build a Wind Turbine Model	
<a href="http://bit.ly/3bQ95oH">bit.ly/3bQ95oH</a>		<a href="http://bit.ly/2WnINUD">bit.ly/2WnINUD</a>	
<b>Scan a QR code with your iPhone</b> <ol style="list-style-type: none"> <li>1. Open the Camera app from the Home screen, Control Center, or Lock screen.</li> <li>2. Select the rear facing camera. Hold your device so that the QR code appears in the viewfinder in the Camera app. Your device recognizes the QR code and shows a notification.</li> <li>3. Tap the notification to open the link associated with the QR code.</li> </ol>		<b>Scan a QR Code with your Android</b> <ol style="list-style-type: none"> <li>1. Open your Camera app and point it steadily for 2-3 seconds towards the QR Code you want to scan.</li> <li>2. Whenever scanning is enabled, a notification will appear.</li> <li>3. If nothing happens, you may have to go to your Settings app and enable QR Code scanning.</li> <li>4. If QR Codes isn't an option in your settings. Don't worry, this only means you'll have to download a third-party QR Code reader.</li> </ol>	

# Organizing Your Information-

Identify the sustainable energy source you are focusing on for your project \_\_\_\_\_

After reading the articles and/or completing your online research, use the table below to outline the important information you plan to include in your **Presentation, Book, or Model Description**. You will submit this with your project!

<p><b>History:</b>  <i>List the important discoveries that led to the development of this energy resource? You can even include a timeline here!</i></p>			
<p><b>How is electricity produced with this energy resource?</b>  <i>Discuss <u>chemical, physical</u> or <u>biological</u> processes that are important when generating electricity with this resource! You can even include a drawing of the process here.</i></p>			
<p><b>Identify the Pros/Cons of this resource:</b>  <i>Be sure to consider the <u>environmental, social, economic and functional</u> benefits and disadvantages.</i></p>	Factor	Pros	Cons
	Environmental		
	Social		
	Economic		
	Functional		
<p><b>Innovations:</b>  <i>Discuss some recent advances with this resource, and the future of this energy source!</i></p>			

**Web Resources:** List the webpages you referenced below (or on a separate page)!

## Exploring Energy Week 2 Rubric

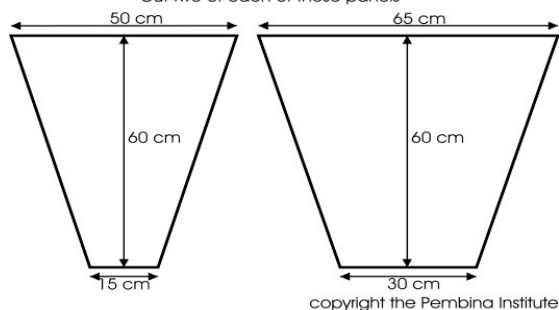
	1-Low Understanding	2-Moderate Understanding	3-Strong Understanding
<b>Organizer</b> <i>Must be submitted with Project</i>	<ul style="list-style-type: none"> <li>Only partially completed in 2 or more sections per the section guidelines below.</li> </ul>	<ul style="list-style-type: none"> <li>1 of the 4 sections is minimally completed per the section guidelines below.</li> </ul>	<ul style="list-style-type: none"> <li>All 4 sections are comprehensively completed per the section guidelines below.</li> </ul>
<b>History</b>	<ul style="list-style-type: none"> <li>History of energy source is minimally explained</li> <li>No chronological order of events/Discoveries/scientists</li> <li>Did not reference research sources.</li> </ul>	<ul style="list-style-type: none"> <li>History of energy source is partially explained</li> <li>Some chronological order of events/Discoveries/scientists</li> <li>Minimally referenced research sources.</li> </ul>	<ul style="list-style-type: none"> <li>History of energy source is comprehensively explained</li> <li>Clear chronological order of events/Discoveries/scientists</li> <li>Research sources thoroughly referenced and listed on sheet</li> </ul>
<b>How Does this Resource Make Energy?</b>	<ul style="list-style-type: none"> <li>Minimally described the scientific principles involved in energy production through this source</li> <li>Minimally described equipment and process in energy production and included no drawing/sketch</li> <li>Did not reference research sources.</li> </ul>	<ul style="list-style-type: none"> <li>Described many of the scientific principles involved in energy production through this source</li> <li>Described equipment and process in energy production, with rough drawing/sketch</li> <li>Minimally referenced research sources.</li> </ul>	<ul style="list-style-type: none"> <li>Comprehensively described the scientific principles involved in energy production through this source</li> <li>Thoroughly described equipment and process in energy production, including a labeled drawing/sketch of the process.</li> <li>Research sources thoroughly referenced and listed on sheet</li> </ul>
<b>Pros/Cons</b>	<ul style="list-style-type: none"> <li>Only partially answered Benefits and Drawbacks or answers have no foundation in the reading or sources</li> <li>Did not reference research sources.</li> </ul>	<ul style="list-style-type: none"> <li>Completely answered Benefits and Drawbacks and answers have some foundation in the reading.</li> <li>Minimally referenced research sources.</li> </ul>	<ul style="list-style-type: none"> <li>Completely answered Benefits and Drawbacks and answers demonstrate thorough understanding</li> <li>Research sources thoroughly referenced and listed on sheet</li> </ul>
<b>Innovation</b>	<ul style="list-style-type: none"> <li>Only partially discussed recent and future developments in this energy source and innovations have no foundation in the reading</li> <li>Did not reference research sources.</li> </ul>	<ul style="list-style-type: none"> <li>Completely discussed recent and future developments in this energy source and innovations have some foundation in the reading.</li> <li>Minimally referenced research sources.</li> </ul>	<ul style="list-style-type: none"> <li>Completely discussed recent and future developments in this energy source and innovations demonstrates thorough understanding of research and readings.</li> <li>Research sources thoroughly referenced and listed on sheet</li> </ul>
<b>Project (Model, Presentation, Brochure, Poster)</b>	<ul style="list-style-type: none"> <li>Project is incomplete and only minimally meets the expectations as designated in the project overview</li> <li>Project does not reference all of the required information from the organizer.</li> <li>Project is messy and disorganized.</li> </ul>	<ul style="list-style-type: none"> <li>Project is complete and meets the expectations as designated in the project overview</li> <li>Project references all of the required information from the organizer.</li> <li>Project is clear and well-organized.</li> </ul>	<ul style="list-style-type: none"> <li>Project is comprehensive and thoroughly includes the expectations as designated in the project overview</li> <li>Project references all the required information from the organizer.</li> <li>Project is exceptionally well-organized, clear and aesthetically appealing.</li> </ul>

## Tools and Materials to Build your Own Solar Oven

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Corrugated cardboard (large flat sheets)</li> <li>• Oven mitts</li> <li>• Duct tape</li> <li>• Black tempera paint, powdered</li> <li>• White glue</li> <li>• Plastic container, approximately 500 ml</li> <li>• Oven thermometer</li> <li>• Aluminum foil (45.7 cm by 7.6 m roll)</li> <li>• 1 Large aluminum foil cake tin</li> </ul> | <ul style="list-style-type: none"> <li>• Shredded paper (for insulation)</li> <li>• Cardboard box (with flaps, approximately 25 cm by 35 cm by 16 cm deep)</li> <li>• Plastic spoon</li> <li>• Utility knife</li> <li>• Meter stick or metric tape measure</li> <li>• Felt tip marker</li> <li>• Sunglasses</li> <li>• Paint brush, 3- to 5 cm wide</li> </ul> |
|--|--|

### Solar Oven Reflector Plan

Cut two of each of these panels



### Build It!

#### A. Prepare the Reflective Panels

1. Using a meter stick and felt pen, draw the outlines of the reflector segments on your cardboard. Use the measurements on the blueprint template.
2. Using the utility knife, carefully cut out the 4 cardboard segments. Use a ruler or straight-edge to help guide your cuts.
3. Remove the top from the white glue bottle and pour approximately 100 ml (about 1/3 cup) into the plastic container. Add 4 tablespoons of water to the glue and stir thoroughly. This will make the glue thinner and easier to spread evenly.
4. Carefully unroll enough aluminum to completely cover one section. Keep the foil as smooth and flat as possible. Wrinkles and creases in the foil will reduce the efficiency of the reflector. If the cardboard is wider than the foil, use two pieces of foil and plan to join them near the middle.

5. Using the paintbrush, apply a thin layer of white glue over the entire surface of



the cardboard. Be sure to spread the glue right to the edge of the cardboard. Use the flat edge of a piece of scrap cardboard as a squeegee to spread the glue out evenly.

6. Before the glue dries, place the foil on the cardboard shiny side up, and smooth it down over the entire surface. Try to press out any wrinkles, bubbles, or creases in the foil. If your foil gets badly wrinkled during the gluing process, tear it off and try again with fresh glue.
7. Using the utility knife, trim the foil so that it is flush with the edge of the cardboard all around. Set the panel aside to dry.
8. Repeat steps 3 through 5 for the remaining sections.
9. Rinse the paint brush thoroughly under the tap to remove any glue. The glue-water mixture can be used in Part D below, so put a lid on the container to keep the glue from drying out.

#### B. Join the Panels

1. Cut 8 pieces of duct tape 60 cm long and set them aside (stick them to the edge of the table for easy retrieval).
2. Arrange the segments as shown in the photo below, foil side down, wide sections alternating with narrow ones. The narrow end of each should point toward you.

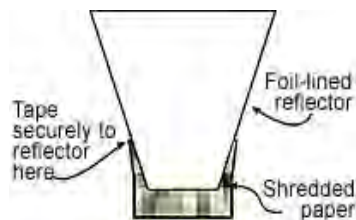


- Carefully position the first two panels, keeping a 2 mm space between them. Position one of your 60- cm strips of duct tape over the joint between the panels. Press it onto the joint, being sure it sticks securely to both panels over its full length.
- Join the third and fourth panels as in step 3 above.
- Carefully flip the joined panels over on the table. This may require two people. Reinforce the joint between each panel using another strip of duct tape.
- Stand your reflector up (foil side in), bringing the edges of the outer two panels together. Have your partner hold the reflector in position while you add the last piece of duct tape.
- Finish the last joint inside the reflector by applying the remaining piece of duct tape.



### C. Add the Insulated Box

- Using duct tape, fasten the cardboard box securely to the bottom of the reflector by its flaps. Be sure the box is centered. Add a few strips of duct tape to the corners to make the assembly more rigid.
- Shred some newspaper by tearing it lengthwise into thin strips. You can also use paper from a mechanical paper shredder. Stuff shredded paper into the gaps between the box and the reflector. Leave a little of the paper on the bottom of the box, as shown in the illustration.



### D. Prepare the Baking Chamber

- In the plastic container, use your plastic spoon to mix 2 teaspoons of black tempera paint with one teaspoon of white glue, and two teaspoons of water (you can substitute glue and water from Part A above if you had any left over).

- Using the brush, apply the black paint evenly over the inside of an aluminum foil loaf tin. Set this aside to dry. It may be necessary to apply two coats of the paint to ensure full coverage of the aluminum.



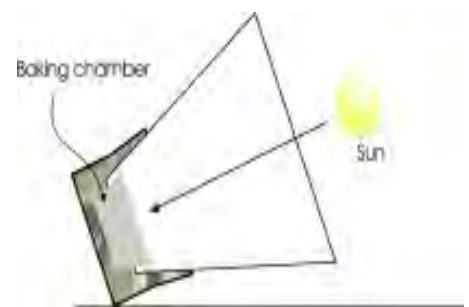
## Test It!

### E. Test and Prepare the Solar Oven for Use

The solar oven is now ready to be tested. If the glue and paint are all dry and it is a sunny day, you can warm up your oven in preparation for its first cooking job.

- Place the oven thermometer inside the painted baking tin.
- Slip the baking tin into the transparent plastic oven bag by placing the tin inside the oven plastic oven bag. Arrange the bag so that the plastic forms a smooth, unwrinkled window over the baking chamber. Place the baking tin inside the oven bag.
- Press the baking chamber tightly into the bottom of the reflector.

Outside, and with your sunglasses on, arrange your cooker so that the cooking chamber is fully illuminated by the sun. The diagram below shows you how to orient the reflector to get the most heat from the sun. You will need to prop the reflector up on some books, bricks, or other objects to keep it at the right angle



Re-Energy.ca: Solar Oven  
Instruction and Plans page

[bit.ly/2yS2tHV](http://bit.ly/2yS2tHV)



# CMSD High School Social Studies

## The 3Rs: Rights • Responsibilities • Realities

The 3R's Unit addresses the following crosscutting statements (standards) in high school social studies.

### Skills based content statements for HS Social Studies:

- **Content Statement 1:** The use of primary and secondary sources of information includes an examination of the credibility of each source.
- **Content Statement 2:** Historians develop theses and use evidence to support or refute positions.
- **Content Statement 3:** Historians analyze cause, effect, sequence, and correlation in historical events, including multiple causation and long-and short-term causal relations.

### This 3Rs 5 week unit provides:

- Enrichment of social studies concepts using real world relevant scenarios.
- Provides a review of middle school social studies content.
- Bridges the content/knowledge gap from middle school to HS US History and US Government.
- Integrates reading and writing literacy standards.

# LESSON THREE



## 3Rs LESSON THREE STUDENT WORKSHEET

### The 4<sup>th</sup> Amendment – Search & Seizure

#### LESSON FACTS/TERMS/CONCEPTS

Affidavit; warrant; probable cause; oath or affirmation; perjury; credible/believable; reliable/trustworthy; warrantless searches; reasonable expectation of privacy; search incident to arrest; plain view; exclusionary rule; consent to search; stop and frisk/pat-down/Terry search; automobile search; inventory search; government agency/administrative search; exigent circumstances; *Mapp v. Ohio*; contraband; *Terry v. Ohio*; *Miranda v. Arizona*

Today we are going to talk about one of the most interesting and controversial areas of law: the right to be free from unreasonable searches and seizures as guaranteed in the 4<sup>th</sup> Amendment to the U.S. Constitution.

#### First, let's look at the language of the 4<sup>th</sup> Amendment:

“The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched and the persons or things to be seized.”

#### Definitions:

**Affidavit:** legal document in which someone swears or affirms that the information in the document is true and accurate

**Probable cause:** reasonable belief that a crime has been or is being committed and that the person, place or thing is involved in the crime

**Oath or affirmation:** testimony given in court, subject to **perjury** (criminal charges for lying under oath)

**Persons, places, things to be searched:** To satisfy requirements for a warrant, the description of each of these things must be provided with enough detail that confusion is unlikely.

**Warrant:** document issued by a legal official authorizing the police to make an arrest or search the premises

Interestingly, the majority of search and seizures in the United States do not involve search warrants. They are warrantless searches but are still allowed by the courts. Here is a list of some of the warrantless searches allowed by the courts:

1. **Search incident to an arrest:** Police can search you without a warrant after you have been arrested.
2. **Consent search:** If you consent to a search (voluntarily), no warrant is needed. (Example: police request that you let them search your home, and you permit it.)
3. **Plain view: Contraband** (illegal or banned goods like drugs or unlicensed guns) is in plain view, so it can be seized. The 4<sup>th</sup> Amendment is applicable where there is a “**reasonable expectation of privacy**,” and items placed in plain view cannot be said to be items intended to be kept private. (Example: your trash placed out on the curb.)
4. **Stop and frisk/pat-down/Terry search:** If police have a reasonable suspicion of criminal activity, they can conduct a limited search for weapons to protect the officer and others from possible harm. The U.S. Supreme Court case giving rise to this warrant exception was *Terry v. Ohio*, where a Cleveland policeman did a stop and frisk/pat-down of a suspect outside a jewelry store in the Playhouse Square area (there is a plaque marking the spot).

5. **Automobile search:** There is less of an expectation of privacy in a moving vehicle than in a home and vehicles can quickly leave the scene, so a warrant is not required if the officer has probable cause to believe drugs or other evidence of criminal activity are in the vehicle. The police can search the entire area that reasonably could contain the contraband. (Example: driver is stopped for swerving and as the officer approaches the car, the police dog, trained to detect drugs, gives its signal that drugs are in the vehicle.)
6. **Inventory search:** Once a vehicle is taken into possession by the police, they are permitted to conduct an inventory of its contents to determine what is in it so that there is no claim later that something was removed. (Example: car towed because driver/owner had no license or car registration and when inventory search is performed, drugs are located in the trunk.)
7. **Governmental agency/administrative searches:** Certain government agencies can conduct searches without warrants. (Examples: school officials can search student lockers without a warrant; border guards can search vehicles and people without a warrant when they attempt to enter the country.)
8. **Exigent circumstances:** Police do not need to get a warrant when doing so is practically impossible, because of, for example, the risk that the evidence will be destroyed or moved, the risk that the suspect will flee, or if there is some danger created if the police do not act immediately. (Examples: police officer walking her beat hears someone in a home scream "Don't kill me!" or police see someone suspected of counterfeiting money in his backyard about to set fire to a large pile of bills.)

Below are a number of hypothetical situations – in the blank space following each situation, circle whether you think the search was legal (does not violate anyone's constitutional rights) or illegal (unconstitutional), then write the kind of warrantless search may be involved from the list provided above.

1. Police see a small group of three teenagers pacing nervously in front of a closed jewelry store late at night and looking in the windows. They stop the teens, and pat them down along their coat and jeans pockets to check for weapons.  
LEGAL or ILLEGAL? Warrantless search: \_\_\_\_\_
2. A man is driving in his car late on a Friday night: he was swerving and failed to stop at a stop sign. The police pull him over, and while he's stopped they allow their drug-sniffing dog to sniff around the outside of his car.  
LEGAL or ILLEGAL? Warrantless search: \_\_\_\_\_
3. Police have a legal search warrant to enter a woman's garage to look for a car reported stolen. While in her garage, they open up her tool box and small drawers to check for drugs and other illegal substances or contraband.  
LEGAL or ILLEGAL? Warrantless search: \_\_\_\_\_
4. Police search through cans of trash placed out on the curb.  
LEGAL or ILLEGAL? Warrantless search: \_\_\_\_\_
5. The high school principal searches a student's locker while they're in class, after hearing from another student that they brought a knife to school.  
LEGAL or ILLEGAL? Warrantless search: \_\_\_\_\_
6. A police officer passing by a house hears someone screaming and saying "Help! Someone help me!" from inside, so they break down the door to enter.  
LEGAL or ILLEGAL? Warrantless search: \_\_\_\_\_
7. An illegally parked car is towed, and police search the trunk and glove compartment while it's impounded in the police lot.  
LEGAL or ILLEGAL? Warrantless search: \_\_\_\_\_

8. Police arrest someone they suspect of dealing drugs, and while in custody they go through the suspect's cell phone looking for saved contacts and phone calls made to known drug dealers. LEGAL or ILLEGAL? Warrantless search: \_\_\_\_\_

As you can see, there are lots of different circumstances to take into consideration in determining how and when the government can search people suspected of committing a crime – it's not always crystal clear. If you're looking for the "right" answer, it's often "it depends." In the examples above, the only ones that are probably illegal are the search through the toolbox in the suspect's garage, and the search through the suspect's cell phone. The courts examine the circumstances closely to determine if suspects had a "**reasonable expectation of privacy**" in those circumstances, or if the government has some other important interest in conducting the search without a warrant.

Let's talk more about what rights you have under the law in these situations and how the courts have found the balance between your rights and the police's responsibility to investigate crime.

*To review, what three elements does the 4<sup>th</sup> Amendment require before a warrant can be issued?*<sup>5</sup> (Hint: look back at the definitions provided earlier in this worksheet.)

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

*What is the meaning of the term "probable cause"?*<sup>6</sup>

\_\_\_\_\_  
\_\_\_\_\_

*What is the meaning of the term "oath or affirmation"?*<sup>7</sup>

\_\_\_\_\_  
\_\_\_\_\_

*How specific does the description have to be of the "persons," "places," "things to be searched"?*<sup>8</sup>

\_\_\_\_\_  
\_\_\_\_\_

When asked to issue a warrant, judges must consider whether the information in the Affidavit for Search Warrant is credible (believable) and reliable (trustworthy). Statements not supported by any specific facts (unsupported generalizations) are not enough for the issuance of a warrant.

## EXCLUSIONARY RULE

One issue to discuss before we review the cases is perhaps the most controversial. What happens when police obtain evidence without a proper warrant? Courts may, depending on the situation, exclude the evidence from use by the government in prosecution of the defendant.

<sup>5</sup> 1. Probable cause, 2. Supported by oath/affirmation, 3. Particularly describing the person, place, or things to be searched

<sup>6</sup> A reasonable belief that a crime has been or is being committed and that the person, place or thing is involved in the crime.

<sup>7</sup> Testimony given subject to perjury

<sup>8</sup> The description of each must be provided in sufficient detail that confusion is unlikely.

In situations where courts have held that a search was illegal, there has been a longstanding debate about whether any contraband from such a search should still be allowed to be used as evidence against the defendant. The U.S. Constitution does not directly address the issue.

Two landmark U.S. Supreme Court cases on this issue are *Mapp v. Ohio* (1961) and *Miranda v. Arizona* (1966). In *Mapp*, the Court ruled that Cleveland police illegally obtained evidence, which consisted of pornographic materials seized from a home without a warrant or valid exception to the warrant requirement. The Court held that the evidence must be excluded from use at trial against the defendant. Doing so, the Court reasoned, would serve to deter the police from conducting improper searches, though it may result in some criminals going free.

In *Miranda*, the Supreme Court extended the **exclusionary rule** to statements obtained from a suspect prior to being informed of his right to not incriminate himself (“Miranda Warnings”).

*Quick response:*

Do you think it’s fair to exclude otherwise reliable evidence based on the government’s illegal actions in getting it? Why or why not? What other remedy would you propose? Write your answers below.

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## YOU DECIDE/MINI TRIALS

You’ll again play the role of a court in deciding a case, as you did during our two lessons: “No Vehicles in the Park” and “1<sup>st</sup> Amendment.”

Now we are ready to consider some 4<sup>th</sup> Amendment cases. In each of the following situations, you will decide the fate of criminal defendants who say the law violates their 4<sup>th</sup> Amendment right to be free of unreasonable searches and seizures. *For each scenario, write 2-3 reasons supporting your argument each as prosecutor and defense attorney. Then write your ruling as judge, including your reasoning. For #2, instead of acting as the court, answer the questions posed.*

### 1. Egging of Vehicles Leads to Child Porn Charges

The police obtained a warrant to search two personal computers of a person arrested in connection with the egging and other damage of a prosecutor’s vehicles. An informant told police the defendant bragged about damaging the vehicles, and later the informant wore a wire that permitted police to record the defendant admitting the crime.

Police then obtained a search warrant that permitted a search of the defendant’s personal computers for any criminal activity, not just the crime at issue. The search of the computer hard drives turned up child pornography.

The defendant alleged the computer search was illegal as the warrant was not limited (specific) to the underlying crime being investigated and asked that the court prohibit police use of what was found on the computers.

The police contended the search was legal because there was ample probable cause that there was additional information on the computers implicating the defendant in the vehicle damage. And in doing that legal search, evidence of child porn was found and should be allowed to be used against the defendant.

Prosecutor: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Defense: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Judge's ruling: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 2. It's in the Genes

23andMe, Ancestry.com, and other genetic profile companies have the genetic profiles of more than 20 million people who have sent them DNA samples in return for personal information (relatives and medical information). The companies promise to keep the information private. Police trying to find a mass murderer have requested a search warrant to search a company's data base for a match to a suspect's DNA.

Would you issue the warrant? \_\_\_\_\_

Why or why not? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

## 3. Gun Found in Vehicle Search

The police arrested a "recent occupant" of a lawfully parked vehicle pursuant to a domestic violence arrest warrant. The police then towed the vehicle on the mistaken assumption that the vehicle was owned by the defendant. During the inventory search, they found a gun and prosecuted the defendant for illegal possession of it. There was no evidence that the defendant or owner of the vehicle had committed any crime in or with the vehicle. And there was no contention the defendant was within arm's length of the vehicle when the arrest occurred. The defendant contended that search was illegal and asked that the fruit of that search (the gun) be suppressed (cannot be used as evidence against him). The police contended it was a valid search, both as a search incident to arrest and as an inventory search based on the "good faith" (but mistaken) belief that the defendant owned the vehicle.

Prosecutor: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Defense: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Judge's ruling: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**4. Drone and Tracker Results in Bust of Fencing Operation**

Police arrested a person for “fencing” (selling stolen goods) property stored at four abandoned homes. The police found the fenced property by using a drone that followed the defendant’s vehicle as it went to the abandoned homes. Because of concerns regarding the drone’s capability (battery life, bad weather, visibility, etc.) the police also put a tracking device under the defendant’s vehicle while it was parked in a public parking spot. Based on the video from the drone and the tracking device, police obtained a search warrant, seized the stolen goods, and arrested the defendant, who can be seen on the drone video carrying stolen goods into and out of the homes.

The defendant moved to suppress the drone and tracking device evidence, as there was no search warrant obtained for use of the either. The police contended that no warrant was needed for the drone or tracking device because they were showing things in public view (the defendant, then, had no right to an expectation of privacy).

Prosecutor: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Defense: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Judge's ruling: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**5. Police Dog Smells Drugs in Automobile**

Police stopped a vehicle that was weaving in and out of its lane and issue a ticket, finding nothing suspicious about the driver’s demeanor or any reason to search the vehicle. After giving the driver the ticket, the police had the driver stay put while a police dog searched the exterior of the vehicle.

The dog, trained to detect illicit drugs, stopped at the trunk of the vehicle and signaled to its handler that drugs were in the trunk. Based on the dog’s actions, the police searched the trunk, found the drugs, and arrested the driver.

The defendant contended the search was illegal because there was no reasonable basis for the police dog’s search without a warrant, which search happened after the driver was “seized” (not permitted to leave). The police contended that the search was legal because the original vehicle stop was legal, and the dog smelled the



drugs which was sufficient probable cause to search the trunk (the vehicle search exception to the search warrant requirement).

Prosecutor: \_\_\_\_\_

\_\_\_\_\_

Defense: \_\_\_\_\_

\_\_\_\_\_

Judge's ruling: \_\_\_\_\_

\_\_\_\_\_

### **6. School Purse Search Leads to Drug Charges**

A public high school student was found smoking cigarettes in a school bathroom with a friend, who admitted to it. Smoking on school grounds was a violation of school policy. In the principal's office the student denied smoking and in fact said she was a nonsmoker. The principal then demanded to see the student's purse and reached into it, finding a pack of cigarettes, rolling papers, marijuana, a pipe, empty plastic bags, numerous one dollar bills, index cards that listed "students that owe me money." The school turned the evidence over to the police who charged the student as a juvenile delinquent.

The student contended the evidence was the fruit of an illegal search and should be suppressed (not be able to used against her). The search was illegal, she contended, because there was insufficient probable cause for the search and she had a reasonable expectation of privacy for the items carried in her purse.

The government argued that the 4th Amendment was not applicable here because public school students should not have a reasonable expectation of privacy with respect to personal belongings while they are at school, and that by bringing them the students have implicitly agreed that the school can search them. It also noted the importance of schools having broad powers to search in light of its need to protect other students and staff in the school environment.

Prosecutor: \_\_\_\_\_

\_\_\_\_\_

Defense: \_\_\_\_\_

\_\_\_\_\_

Judge's ruling: \_\_\_\_\_

\_\_\_\_\_

### 7. Middle School Strip Search

A female public middle school student (age 13) was called to the principal's office after a classmate was found with prescription strength pills (ibuprofen) and said the student had given them to her (the classmate). The school had a prior problem with students bringing contraband to school. The student denied having or supplying the pills to her classmate. The principal asked to and was given permission to search the student's backpack but nothing was found in it. The student was then sent to the school nurse, who was also female. The nurse told the student to strip down to her bra and underwear, which did not result in finding any pills, then she was told to pull out her bra and underwear, "partially exposing her breast ... and pelvic area." No pills were found as a result of that further search.

The student sued the school for violation of her 4th Amendment rights, contending the search was overly intrusive in light of the danger posed. The school contended the search was legal because there was reasonable suspicion that she had prescription pills in her possession and that it was critical for the school officials to stem the spread of the pills into the hands of other students.

Prosecutor: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Defense: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Judge's ruling: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### 8. Mandatory High School Student Athlete Drug Testing

Faced with a major increase in drug use by its students, a school system enacted a random drug testing policy for its student athletes. There was particular concern that student athletes were using illicit drugs and that by addressing that group it would also reduce the use of them by other groups. There was also a concern that student athlete use of illicit drugs was making them more prone to injury. Under the policy, all student athletes had their urine tested each year and 10% of their names were randomly selected for weekly urine testing under the supervision of a school provided monitor, who stood behind a boy while a sample was given and outside the stall if a girl was tested. Student athletes were to provide a list of medications they were taking so any impact on test results would be known. If a student athlete tested positive, a second testing was performed. If that was still positive (and not caused by medications), the student athlete had to choose between participation in a drug assistance program for six weeks or being suspended from sports for the current and next seasons. None of the results would be shared with law enforcement.

A student athlete challenged the policy arguing that the 4th Amendment requires searches be tied to a reasonable individualized suspicion of wrongdoing and there was no such showing as to that student athlete. The school contended that it was a reasonable, non-evasive, non-criminal way to address a significant school problem and that students have no legal right to participate in sports anyway.

Prosecutor: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Defense: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Judge's ruling: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

*Each of these mini trials is based on real-life events – learn more below and respond to the questions following each case.*

**1. Egging of Vehicles Leads to Child Porn Charges**

*Commentary Guide:* Warrants have to be issued based on sufficient probable cause and must not be overly broad. A warrant similar to this one was held to be unconstitutional by the Ohio Supreme Court, in *State v. Castagnola* (2015). The court held there was insufficient probable cause that the computers were used in connection with the crime, and that the warrant was overly broad because it was not limited to the crime at issue (damage to the vehicles). It further held that the Exclusionary Rule should apply; thus – the court held – the child pornography evidence could not be used against the defendant.

*Do you agree with the Court's decision? Why or why not?*

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\_\_\_\_\_  
\_\_\_\_\_

**2. It's in the Genes**

*Commentary Guide:* The person the police suspect identified as the Golden State Killer was recently apprehended in California after police sent the suspect's crime scene DNA sample to a genetic profile company which provided a matched to the suspect's relatives. And in Florida the police recently obtained a search warrant to search another company's database for any match to a suspect's DNA. There are no known legal decisions to guide us on how a court would rule in either case, but legal challenges to the use of such matching are expected. Note that in the first case, the police were actually the customer and no warrant was used.

*If you were the first judge to hear a challenge of DNA testing based on a search warrant, how would you rule?*

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\_\_\_\_\_  
\_\_\_\_\_

**3. Gun Found in Vehicle Search**

*Commentary Guide:* In *State v. Leak* (2015) the Ohio Supreme Court held that the search in question was a violation of the 4th Amendment of both the U.S. and Ohio Constitution. The search incident to arrest exception to a search warrant was not applicable because the defendant was not within arm's length of the vehicle (such that a weapon could be obtained to harm the police). Further, there was no evidence the

defendant committed any crime in or with the vehicle, and the defendant did not own the vehicle. Thus, there was no good reason for it to be towed and an inventory search to have been conducted. The policeman's subjective belief that the defendant owned the car did not – the court further held – warrant application of a "good faith" exception to the 4th Amendment.

*Do you agree with the Court's decision? Why or why not?*

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#### **4. Drone and Tracker Results in Bust of Fencing Operation**

*Commentary Guide:* Use of a drone or other device by police to view things in that are public view does not require a search warrant (no expectation of privacy in public places). So, use of the drone without first getting a warrant would not – in this situation – be a violation of the 4th Amendment.

However, the use of the tracking device is different, as it was attached to the defendant's vehicle without a warrant. In *Torrey Dale Grady v. North Carolina* (2015) the U.S. Supreme Court ruled it is a violation of the 4th Amendment to attach a tracking device to a suspect's vehicle without a search warrant. The court held that the government's installation of tacking device was, in itself, a search which it says constitutes "physically occupying private property for the purpose of obtaining information."

In *Carpenter v. United States* (2018) the U.S. Supreme Court – noting that a cell phone can operate much like a tracking device – held that the government must get a search warrant to obtain access to cell-site location records from a wireless carrier. The court noted that a "cell phone faithfully follows its owner beyond public thoroughfares and into private residences, doctor's offices, political headquarters, and other potentially revealing locales ... Accordingly, when the Government tracks the location of a cell phone it achieves near perfect surveillance; as if it had attached an ankle monitor to the phone's user."

*Do you agree with the Court's decision? Why or why not?*

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#### **5. Police Dog Smells Drugs in Automobile**

*Commentary Guide:* In *Rodriguez v. United States* (2015) the defendant was stopped for driving on the highway shoulder. After attending to everything related to the stop (checking license, etc.) and issuing a warning rather than a ticket, the police asked the defendant for permission to walk his police dog around the vehicle's exterior. The defendant refused, so the police detained the defendant and the vehicle while a second police vehicle arrived and a police dog – 7-8 minutes after the reason for the original stop had ended – smelled around the vehicle and alerted its police handler of methamphetamine. The U.S. Supreme Court held that absent reasonable suspicion, police extension of a traffic stop in order to conduct a dog sniff violates the Constitution's shield against unreasonable seizures. Here, there was no reasonable suspicion. Authority to "seize" a vehicle (stopping it while checking for a license, etc.) ends when the tasks tied to the traffic infraction are, or reasonably should have been, completed.

*Do you agree with the Court's decision? Why or why not?*

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## **6. School Purse Search Leads to Drug Charges**

*Commentary Guide:* In the landmark case of *New Jersey v. T.L.O.* (1985) the U.S. Supreme Court held that public school students do have 4th Amendment rights, rejecting the government's arguments that they have no expectation of privacy or have waived their rights.

However, the court noted that those rights must be balanced against the school's duty to provide a safe educational environment. In light of that duty, schools do not have to provide the same level of 4th Amendment safeguards students as are applicable police searches of nonstudent adults outside the school environment. Thus, a lower standard applies to public school student searches. Schools can search students without a search warrant if they have "reasonable suspicion," which is less than probable cause. Reasonable suspicion exists where – looking at the totality of the circumstances – there are reasonable grounds for suspecting that the search will turn up evidence that the student has or is violating the law or school rules. The scope of the search must be reasonably related to the objectives of the search and not excessively intrusive in light of the student's age and sex and the nature of the infraction. Here, there was sufficient reasonable suspicion that the student was smoking and that warranted a reasonable suspicion that she had cigarettes in her purse. Once the rolling papers were located, that was further reasonable suspicion to search further for marijuana.

*Do you agree with the Court's decision? Why or why not?*

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## **7. Middle School Strip Search**

*Commentary Guide:* In *Safford v. Redding* (2009) the U.S. Supreme Court held the strip search was a violation of the 4th Amendment because the school lacked reasonable suspicion that the pills were a danger or that they were concealed in her underwear. The court was particularly disturbed by the intrusive nature of the search and the age of the person searched. It noted that the "content of the suspicion failed to match the degree of intrusion."

In so ruling, the court cited its *New Jersey v. T.L.O.* (1985) ruling that held public school students have 4th Amendment rights but those rights must be balanced against the school's duty to provide a safe educational environment. The test to be applied to public school searches, the court held in *T.L.O.* is whether there is "reasonable suspicion," rather than the higher probable cause standard generally applicable to adults. (See the discussion of *T.L.O.* in the School Purse Search above if not already discussed.)

*Do you agree with the Court's decision? Why or why not?*

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## 8. Mandatory High School Student Athlete Drug Testing

*Commentary Guide:* In *Vernonia School District 47J v. Acton* (1995), the U.S. Supreme Court held that under the “special needs” doctrine the school’s policy did not violate the 4th Amendment. The special needs doctrine does not require an individualized suspicion as grounds for a search. They are conducted on the basis of a special need other than law enforcement. Random vehicle stops to check for drunk drivers is one example of such search the court has permitted.

Suspicion-less searches are permitted under this test by weighing the privacy interest and the character of the intrusion against nature of the governmental concern and the efficacy of the means used for meeting that concern. Here, the privacy interest and intrusion were slight – urinating into a cup with a monitor present but not actually seeing it happen – and the results were not shared with law enforcement. On the other side, the school’s interest in deterring drug use was compelling and the random testing was an “efficacious” way to respond to that that compelling need.

Note that in *Board of Education of Independent School District No. 92 v. Earls* (2002) the U.S. Supreme Court upheld a similar drug-testing policy applicable to all students participating in competitive extracurricular activities even though there was no evidence presented of an existing drug problem at the school, which was enacting the policy as a “preventative” measure.

*Do you agree with the Court’s decision? Why or why not?*

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## SHORT ANSWERS

### HYPOTHETICAL CASE #1

One evening just as the stores in Tower City were preparing to close, Officer Jordan, a 28-year veteran with the Cleveland Police Department, notices a young man and young woman standing in front of some of the stores. Officer Jordan sits on a bench and observes the couple. The couple talks for several minutes and then the young man walks to the entrance of the Bling Bling Jewelers store, pauses, looks inside, and returns to the young woman. The couple has another conversation and then the young woman slowly walks by the Bling Bling Jewelers’ windows. As the young woman is returning to the young man, a second young man approaches the couple and speaks to them while gesturing toward the exit. As the second young man walks toward the exit, the young woman again approaches the Bling Bling Jewelers store, looks in the entrance, and returns to the first young man. She and the young man repeat this behavior several times over the next ten minutes. After ten minutes, the second young man returns and again speaks to the couple.

Officer Jordan decides that she does not like the behavior of the group. She approaches the group and asks their names. After receiving mumbled responses, Officer Jordan turns around the first young man, whom she later learned was named Danny King, and pats down the outside of his clothes. As she is patting down the pocket area of the young man’s hooded sweatshirt, Officer Jordan feels a hard object. She reaches inside and pulls out a loaded 9mm gun. Officer Jordan orders the group into a nearby store and radios for back-up. Officer Jordan orders the two young men and young woman to face the wall. Officer Jordan pats down the young woman, who states her name is Denise Anderson, and feels a hard object in her pocket. She removes the object, which turns out to be a loaded revolver. Officer Jordan pats down the second young man, David Turner, and finds nothing. Once back-up arrives, the three are taken to the police station. Danny King and Denise Anderson are charged with carrying concealed weapons.

*Was Officer Jordan's pat-down of the suspects and seizure of the guns a violation of the defendants' 4<sup>th</sup> Amendment rights? Why or why not?*

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*Should the guns be admissible at trial against the defendants? Why or why not?*

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*What is and what should be required before an officer can do a pat-down search?*

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**HYPOTHETICAL CASE #2**

Police Officer John Smith notices a van driving east on I-90 in Cleveland. It is going within the speed limit, but slowing, then speeding up, and swerving right and left, but staying within its lane. A bumper sticker says "Legalize Drugs." Officer Smith pulls up in his lane to further observe the driver and van. He sees a young, long-haired driver who is startled at seeing the officer and looks very nervous, then begins looking over his right shoulder into the back of the van. Officer Smith pulls the van over. He suspects the van is carrying drugs. He approaches the van and asks for identification.

He has already run the plates through the computer and found nothing suspicious. The driver's license and registration are also OK. The officer has with him a police dog, trained to find drugs. The dog begins to sniff around the van and begins to scratch at the back door, which is the sign that it smells drugs. Based on the dog's actions, the policeman takes the driver into custody (handcuffs him) and searches the van. He finds no drugs but does find the van is full of pirated DVDs, which the police confiscate. Charges are filed relating to the DVDs. The defendant contests the search as illegal and asks that the DVD evidence be excluded.

