

Teacher Directions

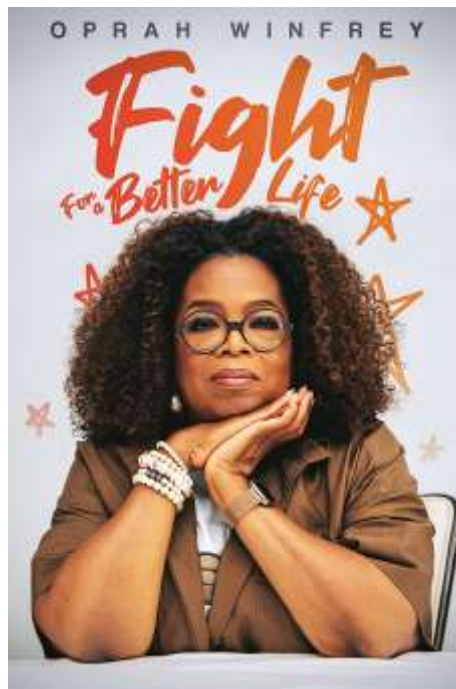
1. Print a 5 page packet for each student (pages 3-6 & 11).
2. Print the four “decoders” and hang them around the room. Leave enough room for students to gather around the decoder. Print in color and laminate if possible. If you choose to work in groups, print out a set of decoders for each group. The photo clues on the decoders ‘tell’ students which decoder to use for each of the four clues.
3. Tell students they have ____ minutes to solve the case, decode the clues and figure out the final 5 digit code. (Use your judgment on time, 30-60 minutes is best.)
4. You can have the students work together with a partner to promote collaboration.
5. The only advice I give my students is... “Complete the decoders in any order. If too many students are gathered around Decoder #2, go to the next decoder or clue. If you get stuck, move on and come back to it. Give yourself time to process the puzzle. You may not understand it at first and that is OK, these puzzles are meant to challenge you!”
6. That’s it! Sit back and relax while students learn about Growth Mindset in a fun, active, engaging activity!
7. If students do not finish, no worries...they still had fun and learned about Growth Mindset!
8. Take a class photo for fun to display in the room, in a parent newsletter, social media (with permission, of course) etc.
9. After the amazing escape challenge, you can have a follow up activity; get into 4 teams and assign each team to watch one of the amazing teenagers’ TED talks; make sure they make notes (and write down 4 questions they would like to be interviewed about) and prepare themselves for the SHOW! Oprah (the teacher) will be then ready to interview these four amazing teenagers (4 teams).
10. Have lots of fun!

The Case

Oprah Winfrey, the 'Most Influential Woman' according to the Life Magazine, is about to host in her popular TV show 4 young people who have inspired the world with their growth mindset and their achievements. She spent two weeks researching and gathering information about these four prodigies. She created four scheduled Instagram posts with pictures and facts . About an hour before the show, she opened her laptop to get ready.

There's just one problem; she forgot her passcode! Without the posts, she will not be able to interview and promote her guests. She knows she has to remain calm and everything will work out. Oprah needs your help retreating her passcode.

Will you help her?



Your mission:

- Visit each decoder and decipher interesting facts about these 4 influential teenagers. It does NOT matter which order you decode the puzzles.
- You may NOT turn in the 5 digit code unless all clues have been decoded.

Good luck!

Oprah is counting on you!



CLUE #1 ...

...

Think about Jack Andraka the next time you hear that something can't be done. Also, keep in mind that you don't necessarily need a giant team, billions of dollars in resources or even more than 15 years of life experience to do something amazing.

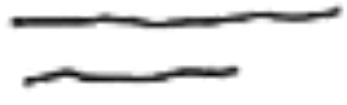
Inventor Jack Andraka, is not your typical teenager. At the age of 15, he invented a new, potentially lifesaving tool for detecting pancreatic, lung, and ovarian cancers. It was after a close family friend died of pancreatic cancer. Jack said the solution came to him during his high school biology class. He was secretly reading an article about nanotubes while the teacher was talking about antibodies. Jack said the two ideas came together in his head and used what he found through Google searches and free online science journals to develop a plan and a budget. Jack contacted about 200 doctors with a proposal to work in their labs, until only one accepted him at Johns Hopkins University. Jack worked after school every day, on weekends and over holidays for seven months until he developed his test. The test, using a dipstick-type sensor, filter paper, and a basic instrument for measuring electrical resistance, detects an increase of a protein that indicates the presence of these cancers during early stages when there is a higher likelihood of a cure.

He holds an international patent on the device and won the grand prize at the 2012 Intel International Science and Engineering Fair.



Why did a 15-year-old beat out billion-dollar pharmaceutical companies with his diagnostic test?

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CLUE #2 ...

Ann's first toy was a box of transistors, and she was soldering circuits by the age of 9. In the sixth grade, Ann entered the world of science fair and ended up competing in a total of ten science fairs. All of her projects were in the area of alternative energy. Fifteen year old Ann decided to invent a light source that wouldn't require any batteries. She ended up creating the **Hollow Flashlight**, a flashlight that runs solely off the heat of the human hand.

Ann's flashlight went viral and caused an international news frenzy as it scooped up top prizes at the Google Science Fair and the Intel Science & Engineering Fair.

By the time Ann finished grade 12, she had done three TEDx talks, presented her flashlight on the Tonight Show with Jimmy Fallon, and was one of Times Magazine's 30 Under 30 World Changers.

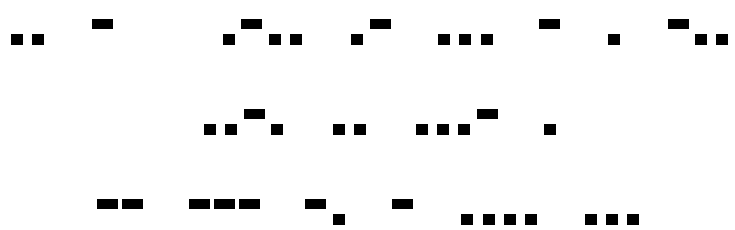
Jimmy Fallon invited Ann back to debut her latest invention, the **eDrink**: a mug that harvests the excess heat of your hot drink and converts it into electricity to charge a phone.

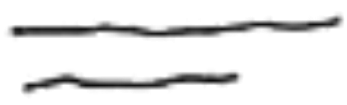
However Ann's life was put on pause when she contracted encephalitis, and she spent months recovering and doing physical therapy so her body could relearn how to walk, see, and move normally.

Back in full health by the summer of 2017, she continued to be awarded worldwide. In 2019, Ann took a step out of her usually science-oriented world, and, fully settled into NYC, studied acting and worked on her **line of childrens toys that ran off of green energy**, which were profiled on CNN.



HOW LONG DID HER RECOVERY LAST?





CLUE #3



Malala was born in Pakistan in 1997, a country where a baby girl is not always cause for celebration.

Her father was a teacher and ran a girls' school in their village. She loved school. But everything changed in 2008, when the Taliban took control of their town. The extremists banned many things — like owning a television and playing music — and enforced harsh punishments for those who defied their orders. They said girls could no longer go to school, and, when she was just 11 years old, she said goodbye to her classmates. **However, she** spoke out publicly on behalf of girls and their right to learn. And this made her a target.

In October 2012, on her way home from school, a masked gunman boarded her school bus and asked, "Who is Malala?" He shot her on the left side of her head.

She woke up 10 days later in a hospital in Birmingham, England. People around the world were praying for her recovery.

After months of surgeries and rehabilitation, she joined her family in their new home in the U.K.

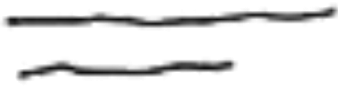
It was then she knew she had a choice: she could live a quiet life or she could make the most of this new life she had been given. She was determined to continue her fight until every girl could go to school and she established Malala Fund, a charity dedicated to giving every girl an opportunity to achieve a future she chooses. In recognition of her work, she received the Nobel Peace Prize and became the youngest-ever Nobel laureate.



WHEN DID SHE RECEIVE HER NOBEL PRIZE?

2433 1415131532121542 445234

4423344543113314 2134454244151533



CLUE #4 ...

Amika George, 22, didn't set out to be an activist. "None of my immediate family were involved in formal politics in any way," she says. And yet, while still a teenager, she ran the successful Free Periods campaign that led to free sanitary products being placed in schools and now she has a book, *Make It Happen*, about how to get involved in politics from the grassroots.

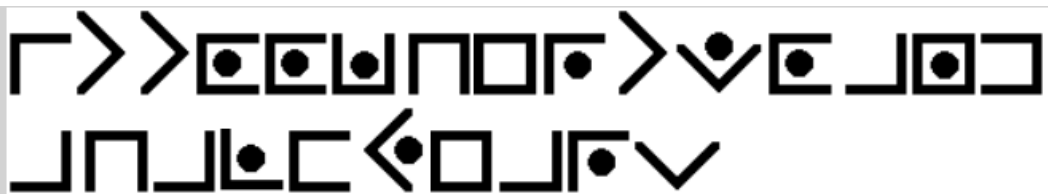
George was just 17 when she read a headline on the BBC website: "Girls Too Poor to Buy Sanitary Products Missing School".

Students in the UK, it seemed, were facing the same problems as those in the developing world. That was 14 March, 2017; by April, she had set up Free Periods, to campaign against period poverty. She promoted her cause diligently: from the obvious (a petition on change.org) to the festive (a demonstration in Parliament Square just before Christmas 2017).

A collaboration with the Red Box Project, founded around the same time with similar aims, led to a legal campaign against the UK government, urging it to comply with its obligations to "ensure equal access to education for all children, irrespective of their sex". Two months after that, in January 2020, the Department for Education committed funding for free period products in all English schools. "Free Periods was successful; I started my campaign before I could even vote, and I think that's a testament to the fact that, actually, you can achieve change as somebody who is not represented in politics.", she concludes.



HOW LONG DID HER CAMPAIGN LAST?





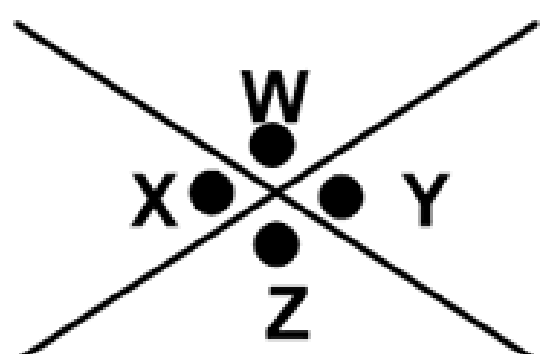
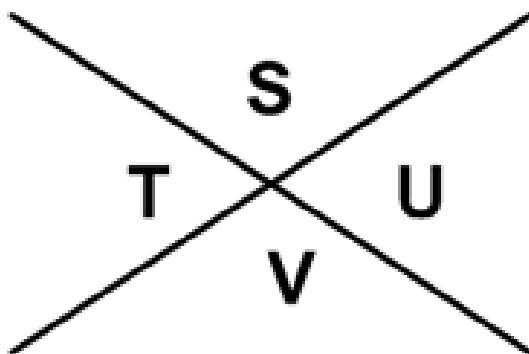
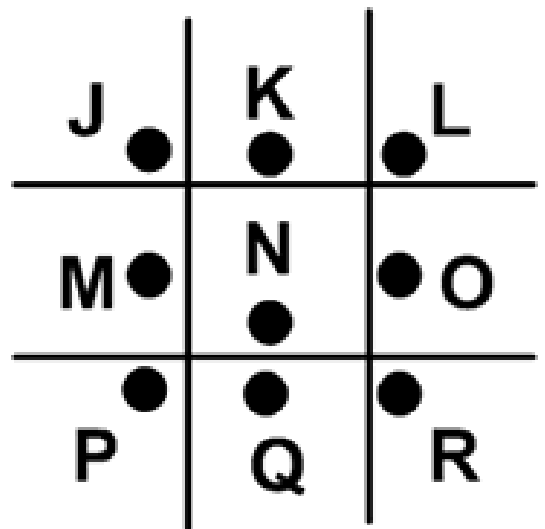
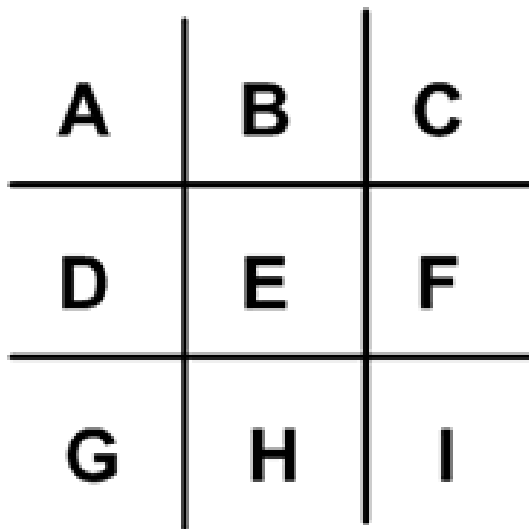
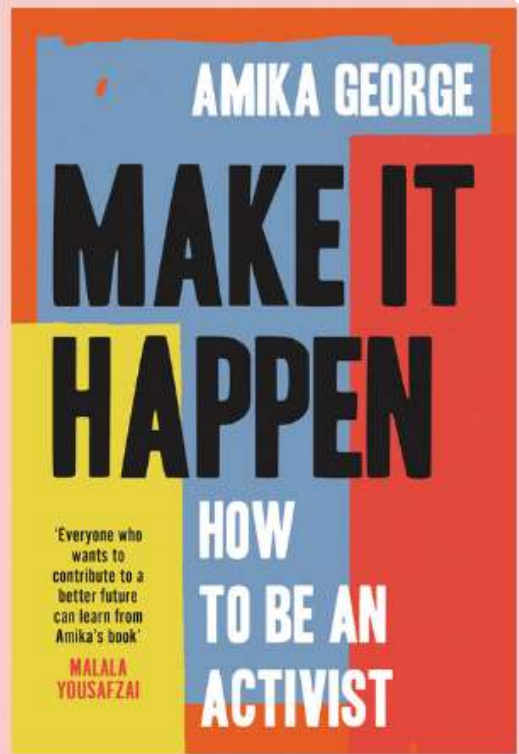
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| 2 | F | G | H | I | K |
| 3 | L | M | N | O | P |
| 4 | Q | R | S | T | U |
| 5 | V | W | X | Y | Z |



5 Digit Code

First number of code : _____

Add all the numbers you decoded until you reach an one digit number.

Second number of code : _____

The number of months it took her to recover.

Third number of code : _____

The number that represents the month she won her Nobel Prize.

Last number of code : _____

The number of months her campaign lasted but without the zero

KEY

CLUE #1

THE TEST COSTS THREE CENTS
 TAKES FIVE MINUTES TO RUN AND
 IS NINETY PERCENT ACCURATE

CLUE #2

IT LASTED
 FIVE
 MONTHS

CLUE #3

IN DECEMBER TWO THOUSAND
 2433 1415131532121542 445234 4423344543113314
 FOURTEEN
 2134454244151533

CLUE #4

IT TOOK HER TWO AND
 A HALF YEARS

5 Digit Code

First number of code : 2 $5+12+3=20=2$

Add all the numbers you decoded until you reach an one digit number.

Second number of code : 5

The number of months it took her to recover.

Third number of code : 12

The number that represents the month she won her Nobel Prize.

Last number of code : 3

The number of months her campaign lasted but without the zero