

Santa Loves STEM activity sheet

Now that you've seen our Santa Loves STEM video for 2019, why not have a go at these fun Christmas activities. Season's Greetings from the IET.

Word search puzzle

Which words from the list can you find in the grid?
Which words are missing?

Y I R E T Y Y P M C P S N T E
G G V E L N O M H O N H E E V
T I O I I R E I M O L C N A I
E O M L T N M S I A N L G C T
S A O I O N D T E E S S I H S
F T O L E N C E I R P A N E E
H N E Y K A H C E P P M E R E
S C U M R I S C A R C T E A Y
W Q K F S S T E E R T S R T M
G N I K C O T S F T Z I U S M
S C I T A M E H T A M R R D O
D I G E S T I O N N K H Y Y T
B I O L O G Y C R E K C A R C
Q Q S L E I G H Y A T N A S T
K P R O U D A Z O P U B O G Y

- | | | |
|-----------|----------------|------------|
| APP | LOOK AT ME NOW | STAR |
| BIOLOGY | MATHEMATICS | STEM |
| CHIMNEY | MOLLIE | STOCKING |
| CHRISTMAS | PORTIONS | TEACHER |
| CRACKER | PRESENT | TECHNOLOGY |
| DIGESTION | PROUD | TOMMY |
| ENGINEER | REINDEER | TOOLKIT |
| EVIE | SAMMY | TREE |
| FAMILY | SANTA | TURKEY |
| FESTIVE | SCIENCE | |
| FRACTIONS | SLEIGH | |

Colouring

Bring Santa's family to life in your own way!



Poster competition

- Design your own 'Look at me now' poster.
- Draw a picture of yourself in your chosen, future career.
- Your chosen career could be a current job you're interested in or why not make up a brand new job that involves science, technology, engineering or maths (STEM)?
- Email your entries to: ieteducation@theiet.org or you can add them to Facebook or Twitter @IETeducation using #IETLookAtMeNow

Symbols

Match the Christmas items to their chemical symbols.

Salt	H ₂ O
Snow	Au
Alcohol	C ₁₂ H ₂₂ O ₁₁
Sugar	NaCl
Ice	C ₇ H ₈ N ₄ O ₂
Gold	C ₂ H ₂ OH
Chocolate	H ₂ O

Hot chocolate science experiment

Materials needed:

- Two mugs (microwaveable)
- Water
- Milk
- Hot chocolate mix
- Spoon
- Thermometer
- Marshmallows
- Timer

Instructions:

1. Pour 6 ounces of water into one mug and 6 ounces of milk into the other mug.
2. Ask an adult to microwave both mugs for 1 minute 30 seconds each, or until the water and milk are hot.
3. Ask an adult to remove the mugs from the microwave, be careful, the mugs will be hot. You will then need to add the same amount of hot chocolate mix to each mug and stir until it is completely dissolved.
4. Measure the temperature of each mug and record the data. (Hint: the hot chocolate made with water should be hotter).
5. Next, place the same number of marshmallows in each mug and start
6. the timer. After set time intervals, record how many marshmallows have dissolved. (Hint: the marshmallows in the hot chocolate made with water should dissolve more rapidly because the water should be hotter. The hotter the liquid, the quicker the sugary marshmallows will dissolve).
7. Time for you to plan your own extension to this experiment! Why not use different liquids, different mugs, different sweets, different hot chocolate powder, etc. Remember to record your results and then you can compare and evaluate.



Santa Loves STEM anagrams

Can you unscramble the Christmas words?

- | | | | | |
|------------|-------------|----------|-------------|-------------|
| a) rats | d) carlo | g) tsana | j) eret | m) listen |
| b) acrrke | e) kyruet | h) yohll | k) persntes | n) ticksong |
| c) manswon | f) niderere | i) lsleb | l) dluhpro | o) dingdup |
| a) _____ | d) _____ | g) _____ | j) _____ | m) _____ |
| b) _____ | e) _____ | h) _____ | k) _____ | n) _____ |
| c) _____ | f) _____ | i) _____ | l) _____ | o) _____ |

Find more information about #SantaLovesSTEM at theiet.org/santa-loves-stem

