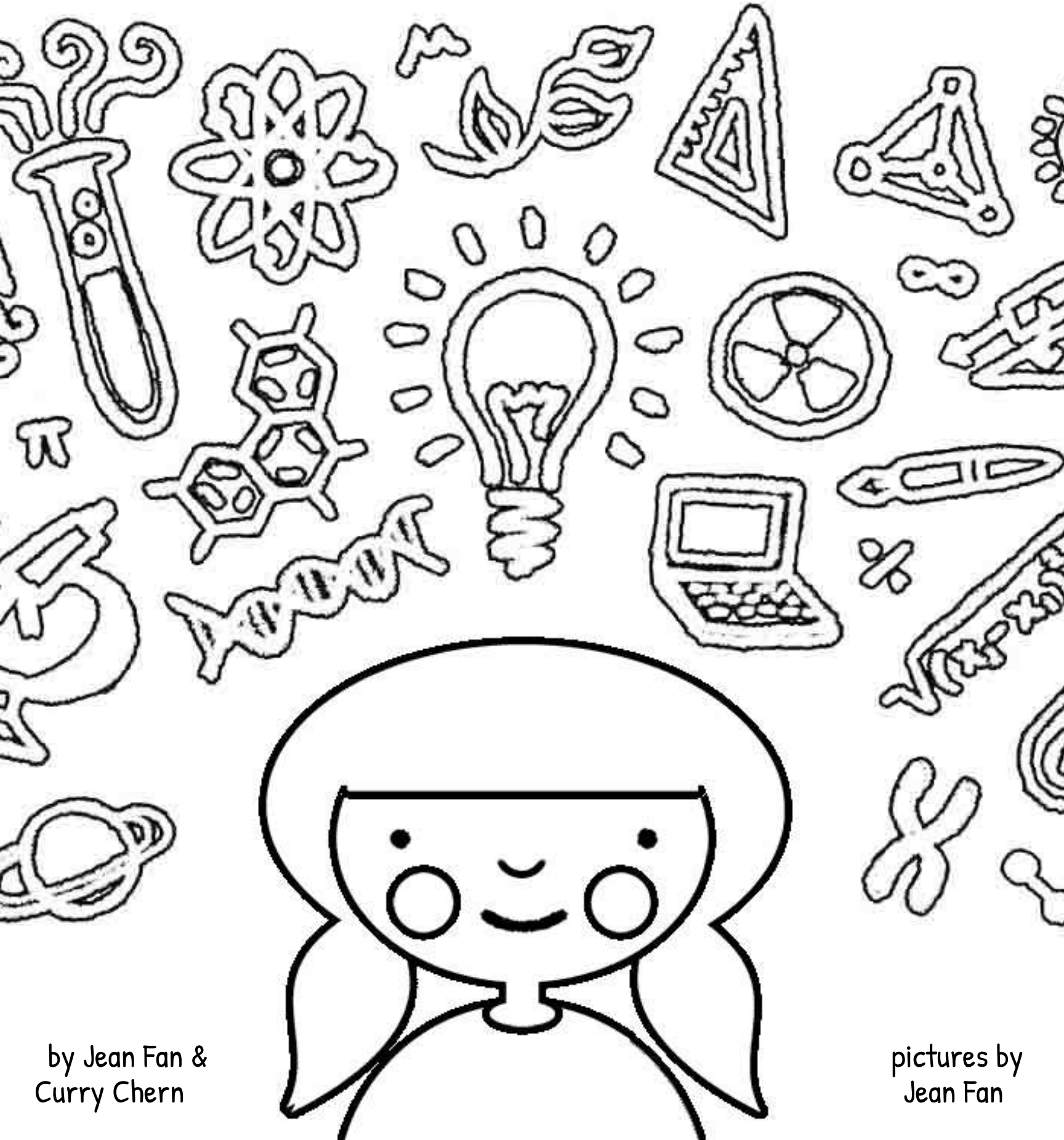


_____ 's
Little Book of Big Dreams



by Jean Fan &
Curry Chern

pictures by
Jean Fan

_____ 's
Little Book of Big Dreams

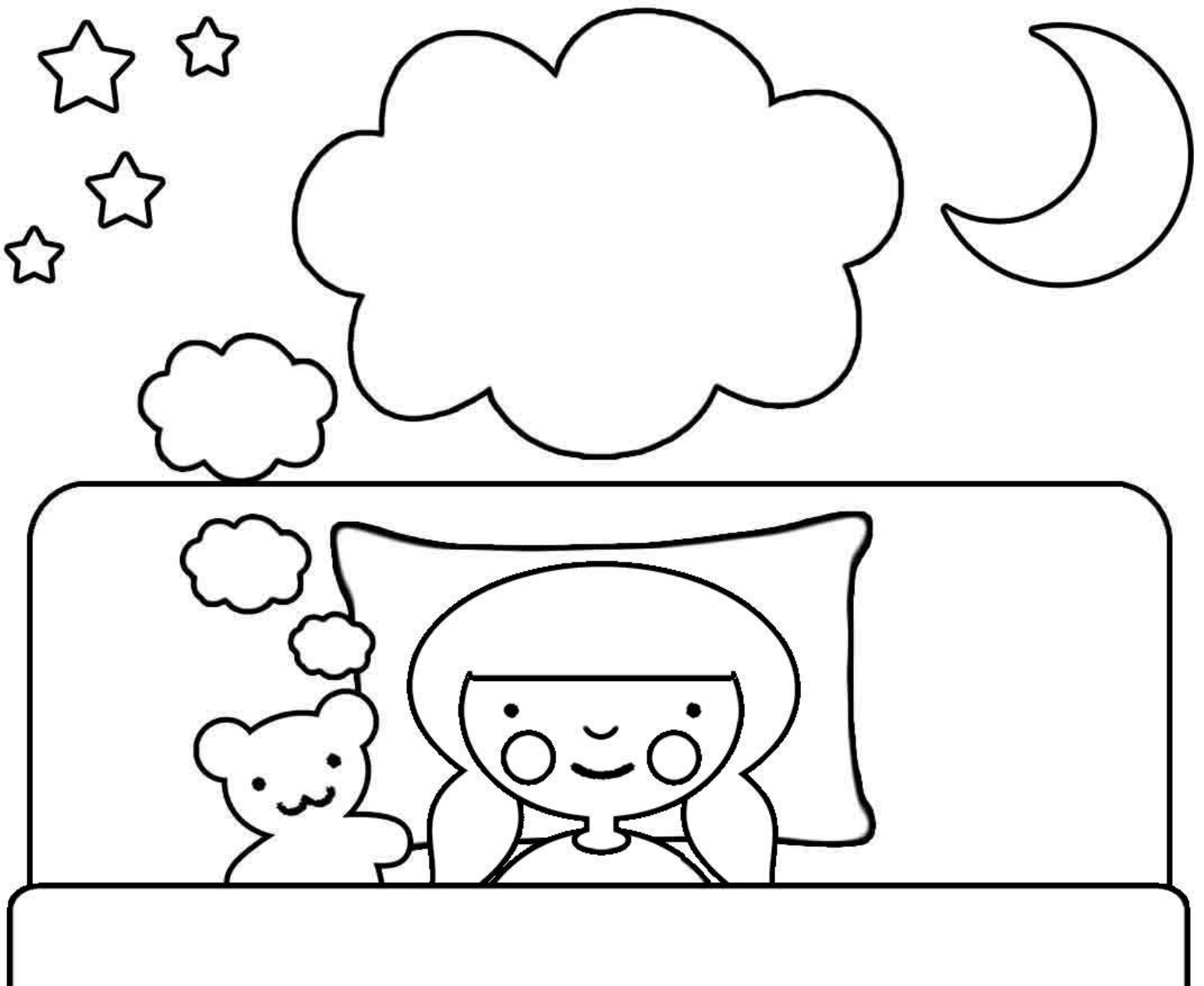
by Jean Fan &
Curry Chern

pictures by
Jean Fan

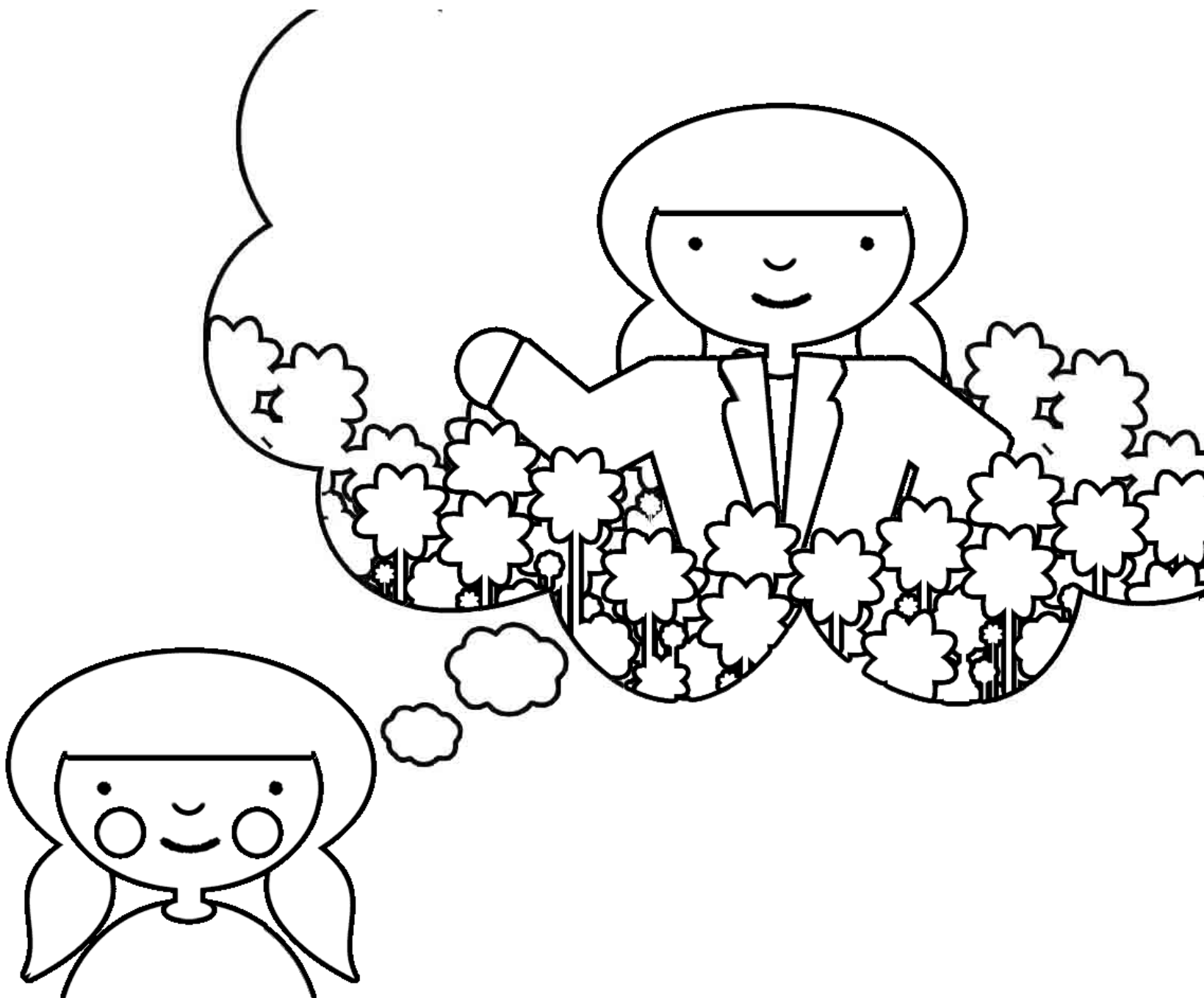
c u S T E M  i z e d

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As _____ gets ready for bed tonight,
after winding down and being tucked in tight,
she dozes off into her nightly snooze,
and a magical transformation ensues.



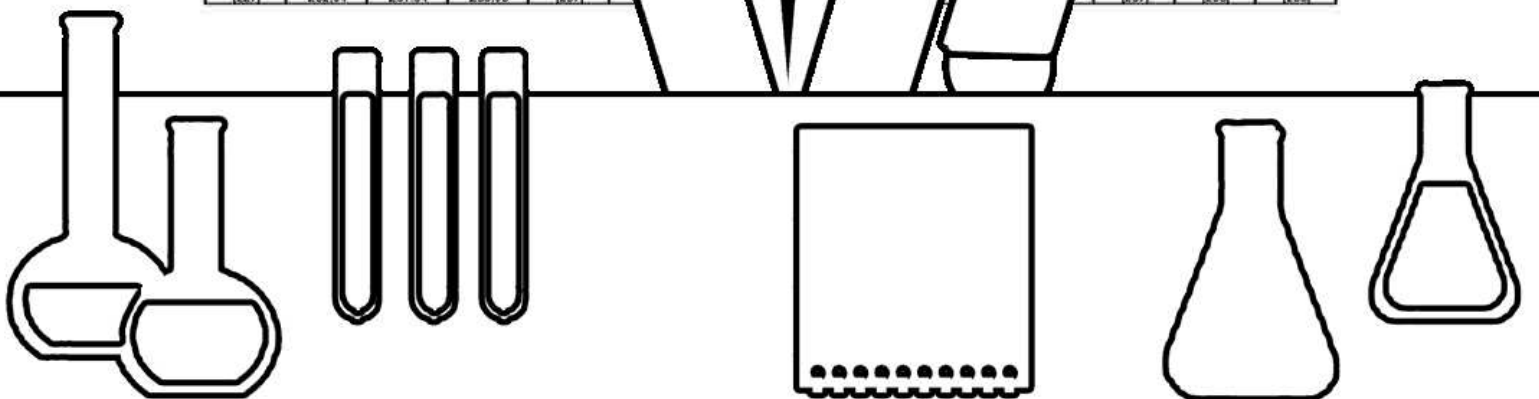
_____ is all grown up with much to do,
with big shoes, big thoughts, and big plans too.
So as _____ sleeps, she begins to see,
what she can do and what she can be.



_____ is a chemist. She is a master of potions.
 She makes crayons, insulin, and nice smelling lotions.
 She mixes chemicals so that they bond or collapse,
 to study their reactions and make explosions perhaps.

_____ 's
 Chemistry Lab

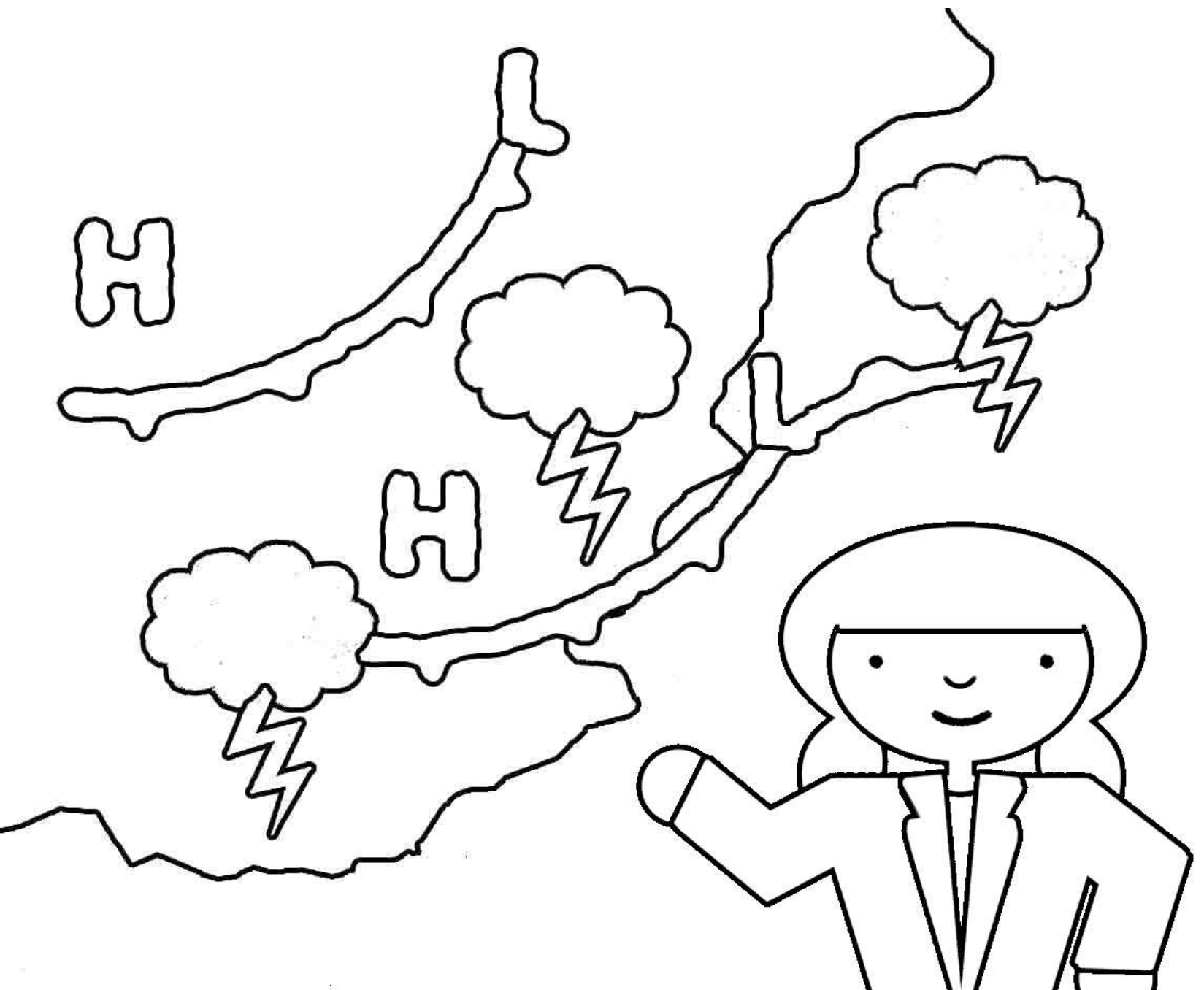
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------------|---------------------------------|---------------------------------|--------------------------------|------------------------------------|---------------------------------|---------------------------------|--------------------------------|----------------------------------|-------------------------------|------------------------------|-------------------------------|---------------------------------|---------------------------------|--------------------------------|--------------------------------|-------------------------------|---------------------------------|---------------------------------|---------------------------------|-------------------------------|------------------------------------|-------------------------------|--------------------------------|--------------------------------|--------------------------------|---------------------------------|--------------------------------|----------------------------------|----------------------------------|-------------------------------|-----------------------------------|--------------------------------|----------------------------------|-------------------------------------|-------------------------------|------------------------------------|-------------------------------|--------------------------------|----------------------------------|--------------------------------|----------------------------------|-----------------------------------|----------------------------------|------------------------------------|-------------------------------|-----------------------------------|--------------------------------|----------------------------------|----------------------------|
| hydrogen 1 H 1.0079 | beryllium 4 Be 9.0122 | | | | | | | | | | | | | | | | | helium 2 He 4.0026 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| lithium 3 Li 6.941 | | boron 5 B 10.811 | carbon 6 C 12.011 | nitrogen 7 N 14.007 | oxygen 8 O 15.999 | fluorine 9 F 18.998 | neon 10 Ne 20.180 | | | | | | | | | | | | | | | | | argon 18 Ar 39.948 | | | | | | | | | | | | | | | | | | | | | | | | | |
| sodium 11 Na 22.990 | magnesium 12 Mg 24.305 | aluminum 13 Al 26.982 | silicon 14 Si 28.086 | phosphorus 15 P 30.974 | sulfur 16 S 32.065 | chlorine 17 Cl 35.453 | krypton 36 Kr 83.80 | | | | | | | | | | | | | | | | | radon 86 Rn [222] | | | | | | | | | | | | | | | | | | | | | | | | | |
| potassium 19 K 39.098 | calcium 20 Ca 40.078 | scandium 21 Sc 44.956 | titanium 22 Ti 47.887 | vanadium 23 V 50.942 | chromium 24 Cr 51.996 | manganese 25 Mn 54.938 | iron 26 Fe 55.845 | cobalt 27 Co 58.933 | nickel 28 Ni 58.693 | copper 29 Cu 63.546 | zinc 30 Zn 65.38 | gallium 31 Ga 69.723 | germanium 32 Ge 72.61 | arsenic 33 As 74.922 | selecnium 34 Se 78.96 | bromine 35 Br 79.904 | strontium 38 Sr 87.62 | yttrium 39 Y 88.906 | zirconium 40 Zr 91.224 | niobium 41 Nb 92.906 | molybdenum 42 Mo 95.94 | rhodium 45 Rh 101.07 | indium 49 In 114.82 | tin 50 Sn 118.71 | antimony 51 Sb 121.76 | tellurium 52 Te 127.60 | iodine 53 I 126.90 | xenon 54 Xe 131.29 | cesium 55 Cs 132.91 | barium 56 Ba 137.33 | lanthanum 57 La 138.91 | actinium 89 Ac [227] | lawrencium 103 Lr [262] | rutherfordium 104 Rf [261] | hafnium 72 Hf 178.49 | tantalum 73 Ta 180.95 | tungsten 74 W 183.84 | niobium 41 Nb 92.906 | seaborgium 106 Sg [266] | bohrium 107 Bh [264] | meitnerium 109 Mt [268] | copernicium 112 Cn [285] | ununoctium 118 Og [294] | unusquadrum 114 Uuq [289] | lead 82 Pb 207.2 | bismuth 83 Bi 208.98 | polonium 84 Po [209] | astatine 85 At [210] | radon 86 Rn [222] |
| francium 87 Fr [223] | radium 88 Ra [226] | | | | | | | | | | | | | | | | | radon 86 Rn [222] | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | lanthanum 57 La 138.91 | cerium 58 Ce 140.12 | praseodymium 59 Pr 140.91 | neodymium 60 Nd 144.24 | promethium 61 Pm [145] | europium 62 Eu 151.96 | gadolinium 63 Gd 157.25 | terbium 64 Tb 158.93 | erbium 68 Er 167.26 | thulium 69 Tm 168.93 | ytterbium 70 Yb 173.04 | lutetium 71 Lu 174.967 | holmium 72 Ho 164.930 | erbium 68 Er 167.26 | thulium 69 Tm 168.93 | ytterbium 70 Yb 173.04 | lutetium 71 Lu 174.967 | actinium 89 Ac [227] | thorium 90 Th 232.04 | protactinium 91 Pa 231.04 | uranium 92 U 238.03 | neptunium 93 Np [237] | plutonium 94 Pu [244] | americium 95 Am [243] | curium 96 Cm [247] | berkelium 97 Bk [247] | californium 98 Cf [251] | einsteinium 99 Es [252] | fermium 100 Fm [257] | mendelevium 101 Md [258] | nobelium 102 No [259] | lawrencium 103 Lr [260] | actinium 89 Ac [227] | thorium 90 Th 232.04 | protactinium 91 Pa 231.04 | uranium 92 U 238.03 | neptunium 93 Np [237] | plutonium 94 Pu [244] | americium 95 Am [243] | curium 96 Cm [247] | berkelium 97 Bk [247] | californium 98 Cf [251] | einsteinium 99 Es [252] | fermium 100 Fm [257] | mendelevium 101 Md [258] | nobelium 102 No [259] | lawrencium 103 Lr [260] | |



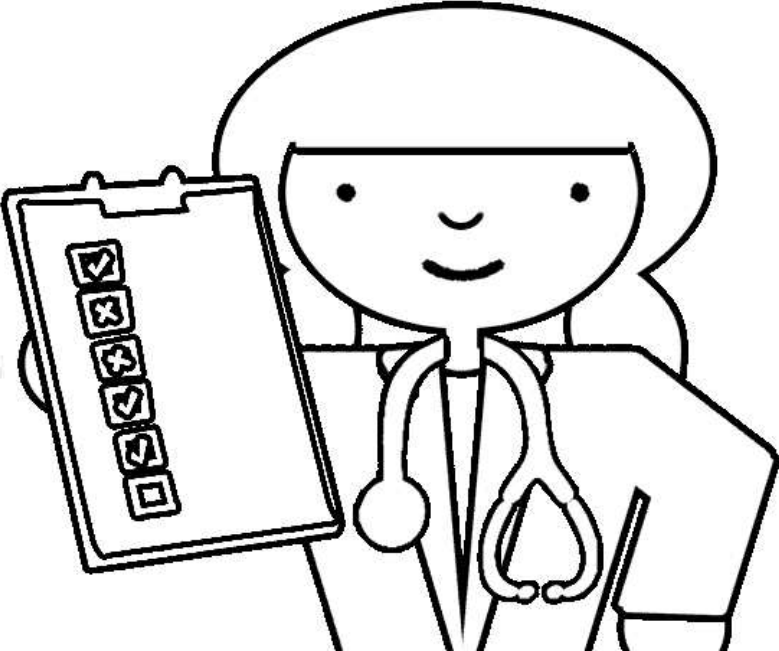
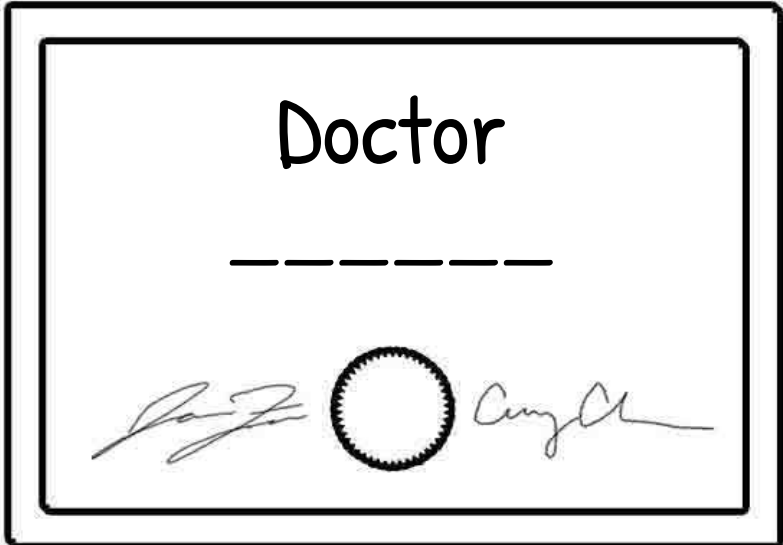
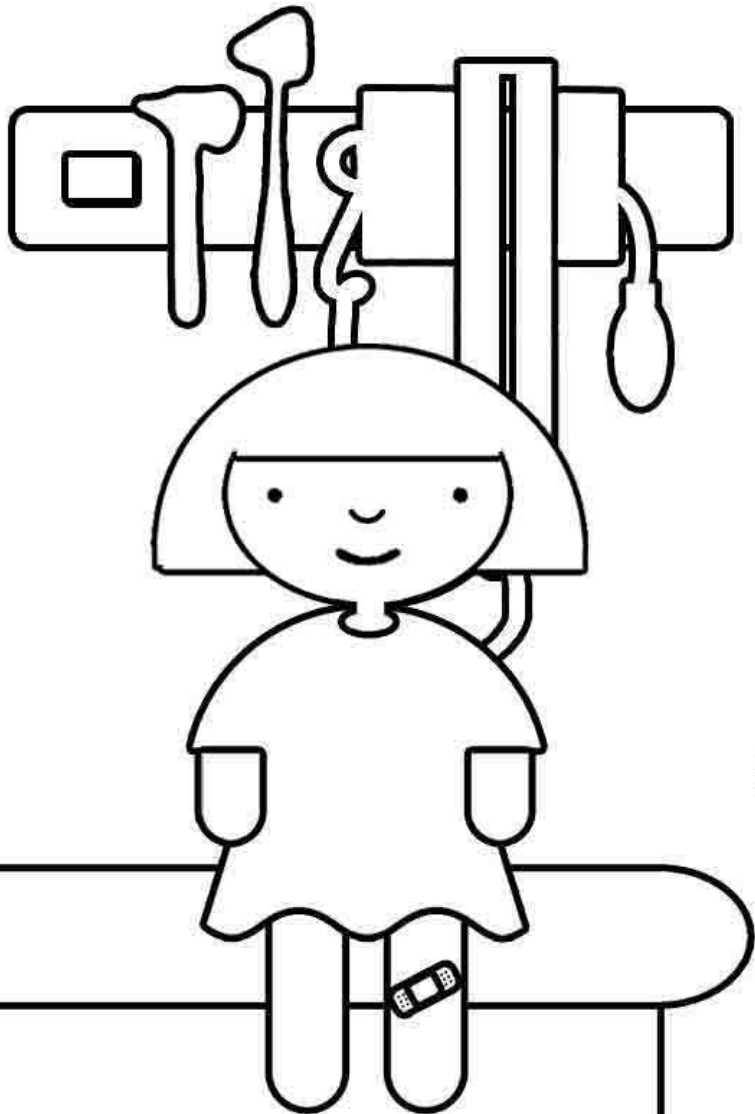
_____ is a programmer. She writes in code,
to create awesome games for us to download.
She makes browsing and searching online a breeze,
and even designs apps for phones and TVs.



_____ is a meteorologist. She studies the sky,
to see if the weather will be wet or dry.
She tracks the paths of storms and hurricanes,
and reminds us to bring umbrellas when it rains.



_____ is a doctor. She cures what is feeling wrong,
using science to make sure we are healthy and strong.
She checks our eyes, nose, mouth, and ears,
and tracks our height for years and years.



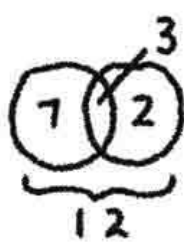
_____ is a mathematician. She loves to count.
 She helps shops decide how much money to discount.
 She studies numbers and patterns and their properties,
 to better understand the world and its commodities.

Derivation of _____'s Formula

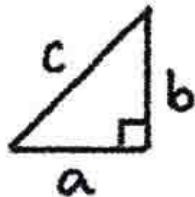
$$1 + 1 = 2$$

$$1 + 1 + 1 = 3$$

$$2 + 1 = 3$$



$$a^2 + b^2 = c^2$$



$$1$$

$$1 \quad 1$$

$$1 \quad 2 \quad 1$$

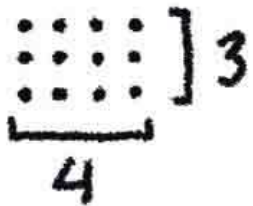
$$1 \quad 3 \quad 3 \quad 1$$

$$2x + y = 3$$

$$x + y = 2$$

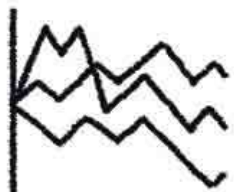
$$x = 1$$

$$y = 1$$



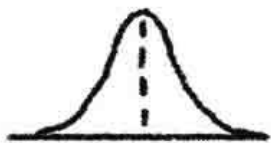
$$\frac{3}{x4}$$

$$\frac{3}{12}$$



$$S_n = \sum_{i=1}^n z_i$$

if $(x+y)^n = \sum_{k=0}^n \binom{n}{k} x^{n-k} y^k$
 then $\binom{n}{k} = \binom{n-1}{k-1} + \binom{n-1}{k}$



$$f(x) = \frac{1}{\sigma\sqrt{2\pi}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

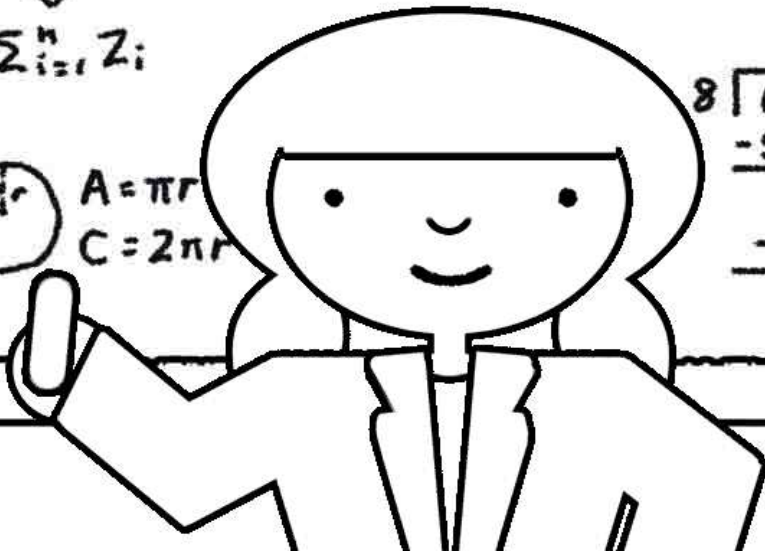


$$A = \pi r^2$$

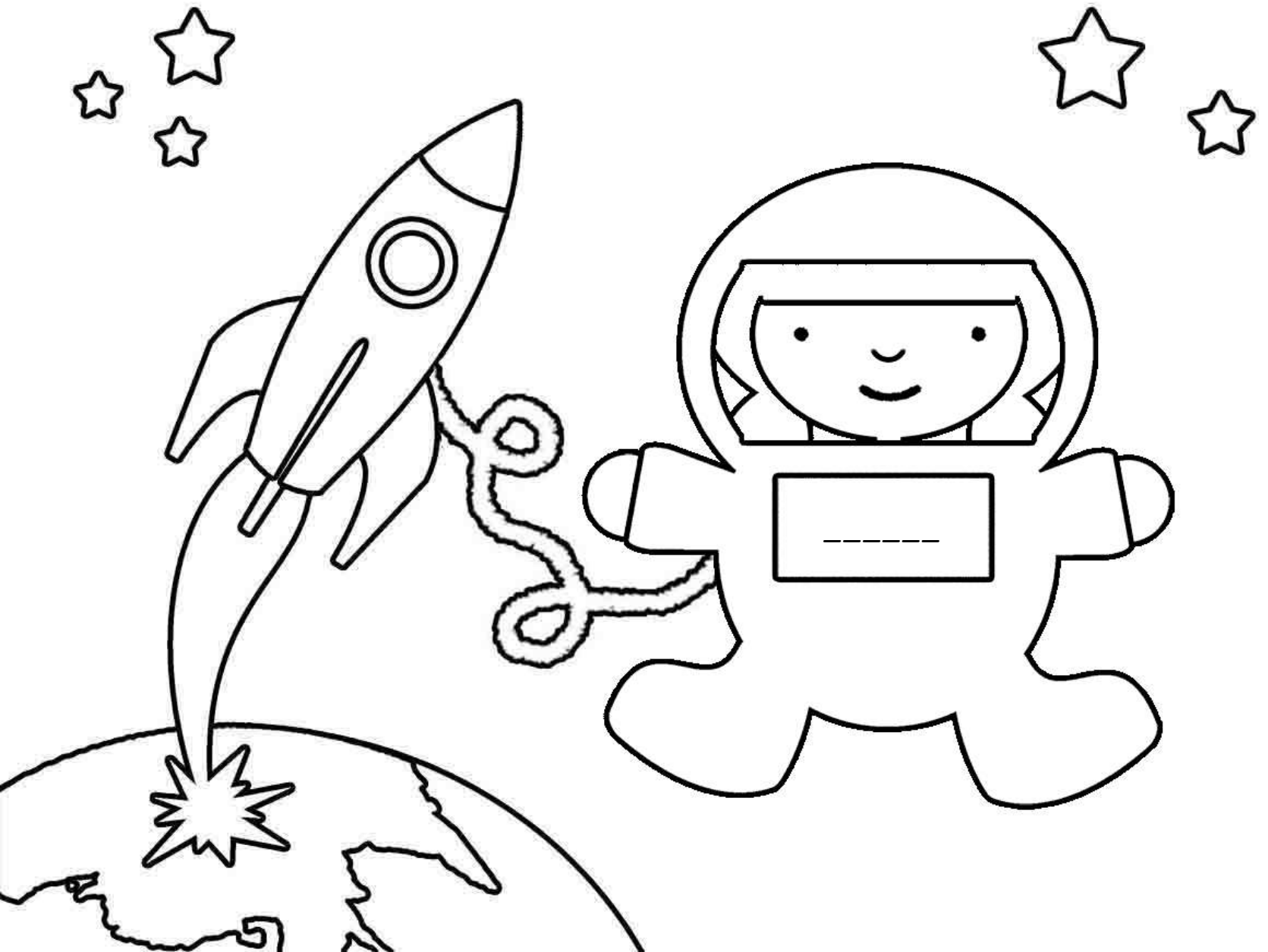
$$C = 2\pi r$$

$$8 \overline{) 76r4}$$

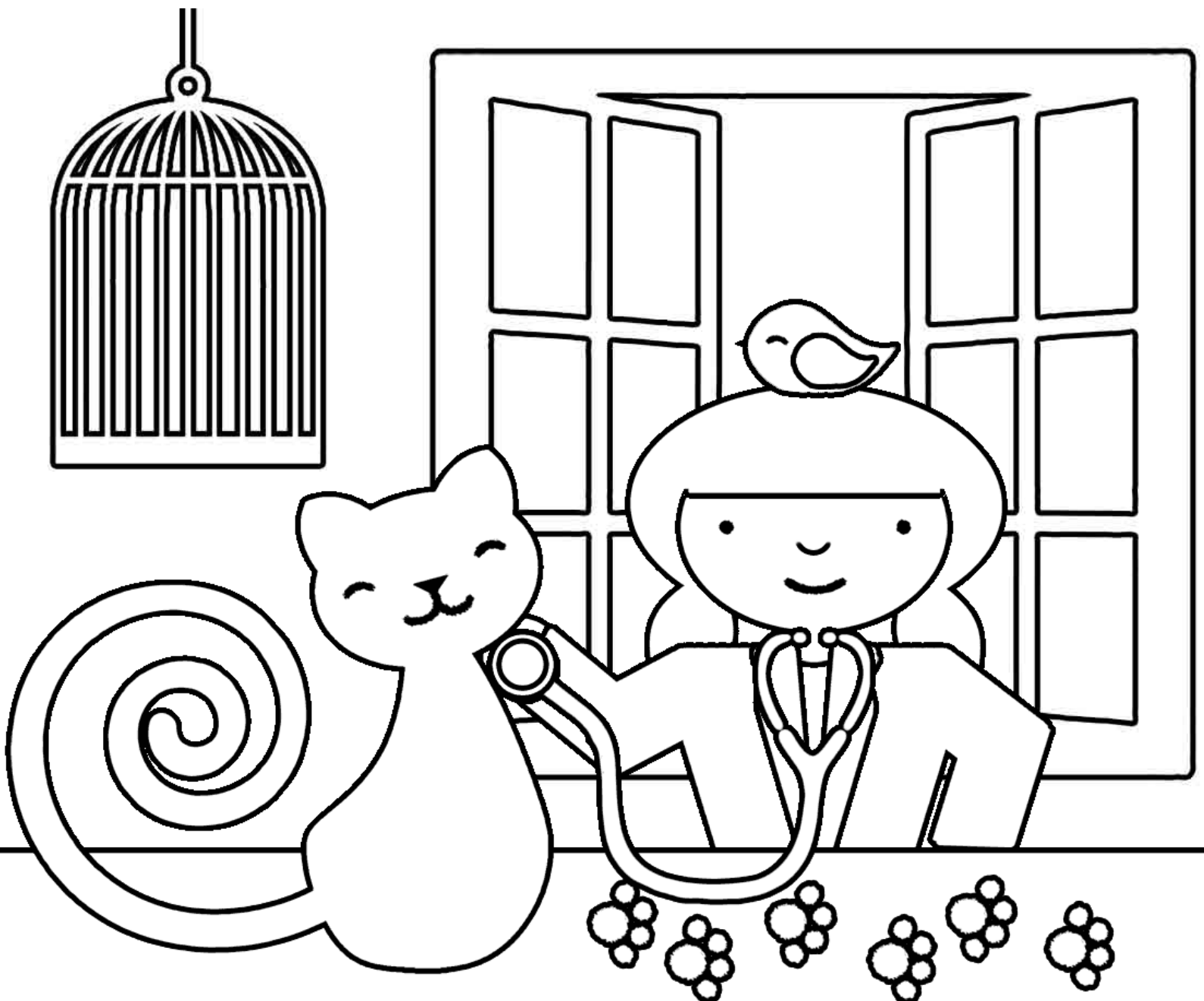
$$\begin{array}{r} 952 \\ 8 \overline{) 76r4} \\ \underline{-56} \\ 52 \\ \underline{-48} \\ 4 \end{array}$$



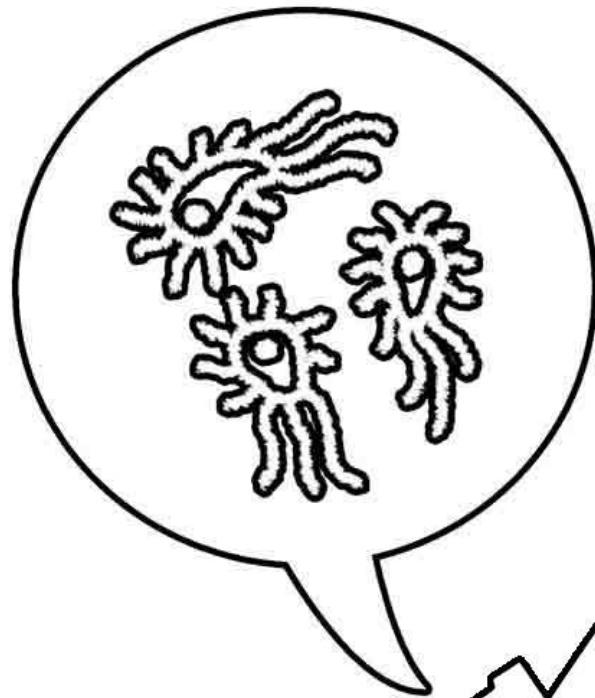
_____ is an astronaut. She flies into space,
searching for the presence of an alien race.
She floats among the planets, moons, and stars,
to become the first person to land on Mars.



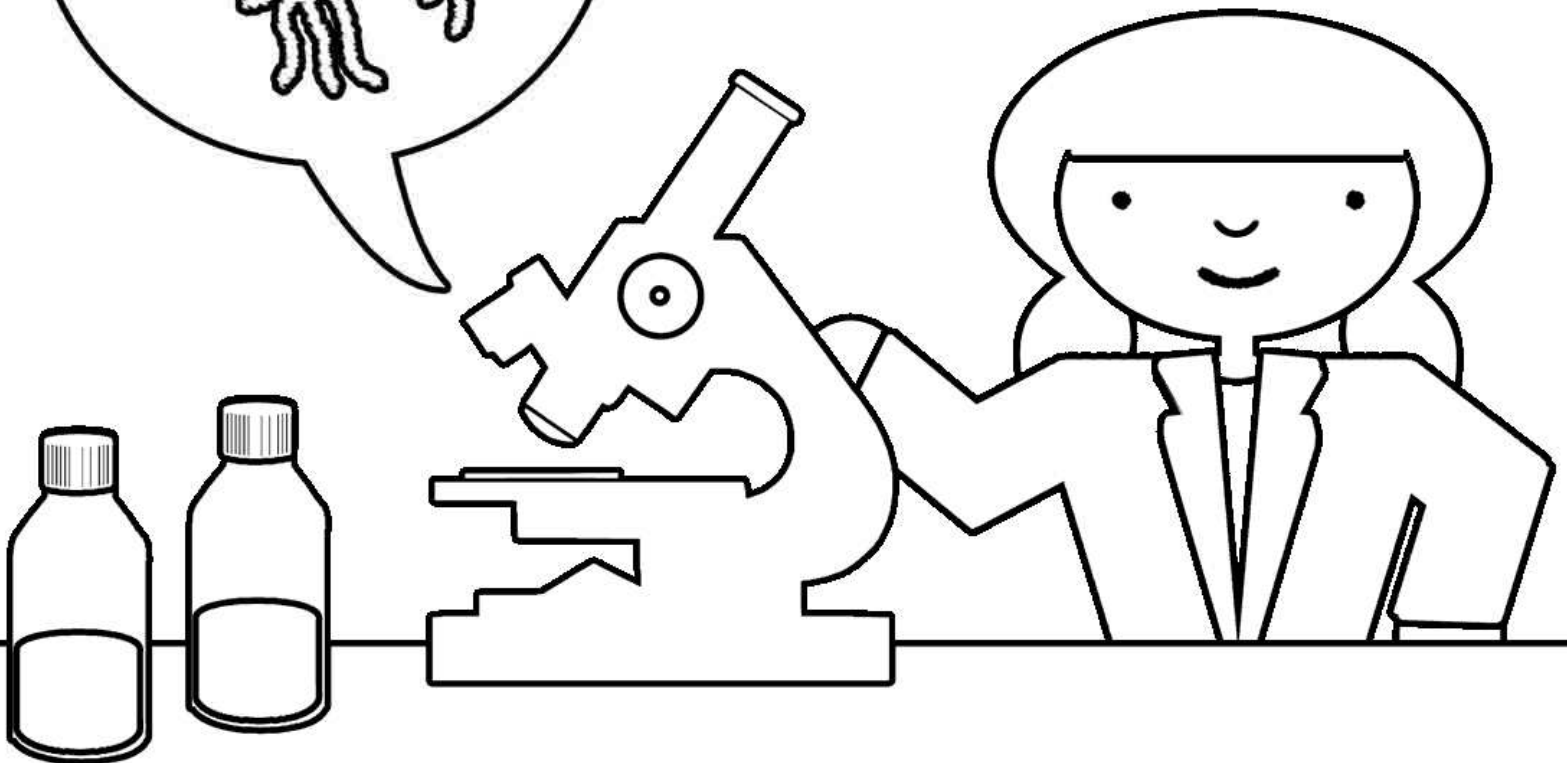
_____ is a veterinarian. She cares for cats and dogs,
and birds, lizards, rabbits, and even hedgehogs.
She rids our fuzzy friends of pesky ticks and fleas,
making all pets healthy by curing disease.



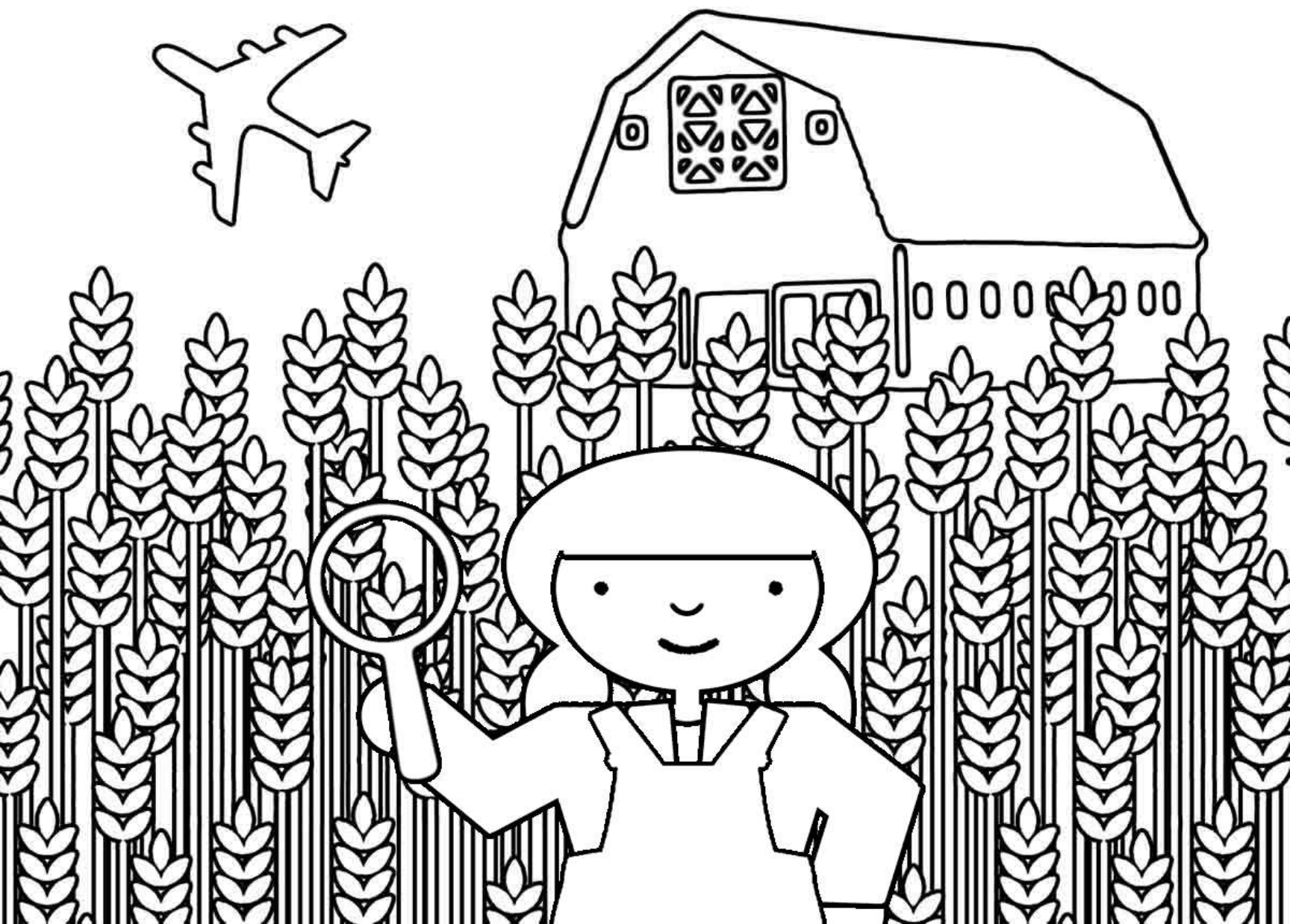
_____ is a biologist. She studies living things,
asking why fish have gills and why birds have wings.
She looks at the blueprint of life called DNA,
to understand why mother nature made us this way.



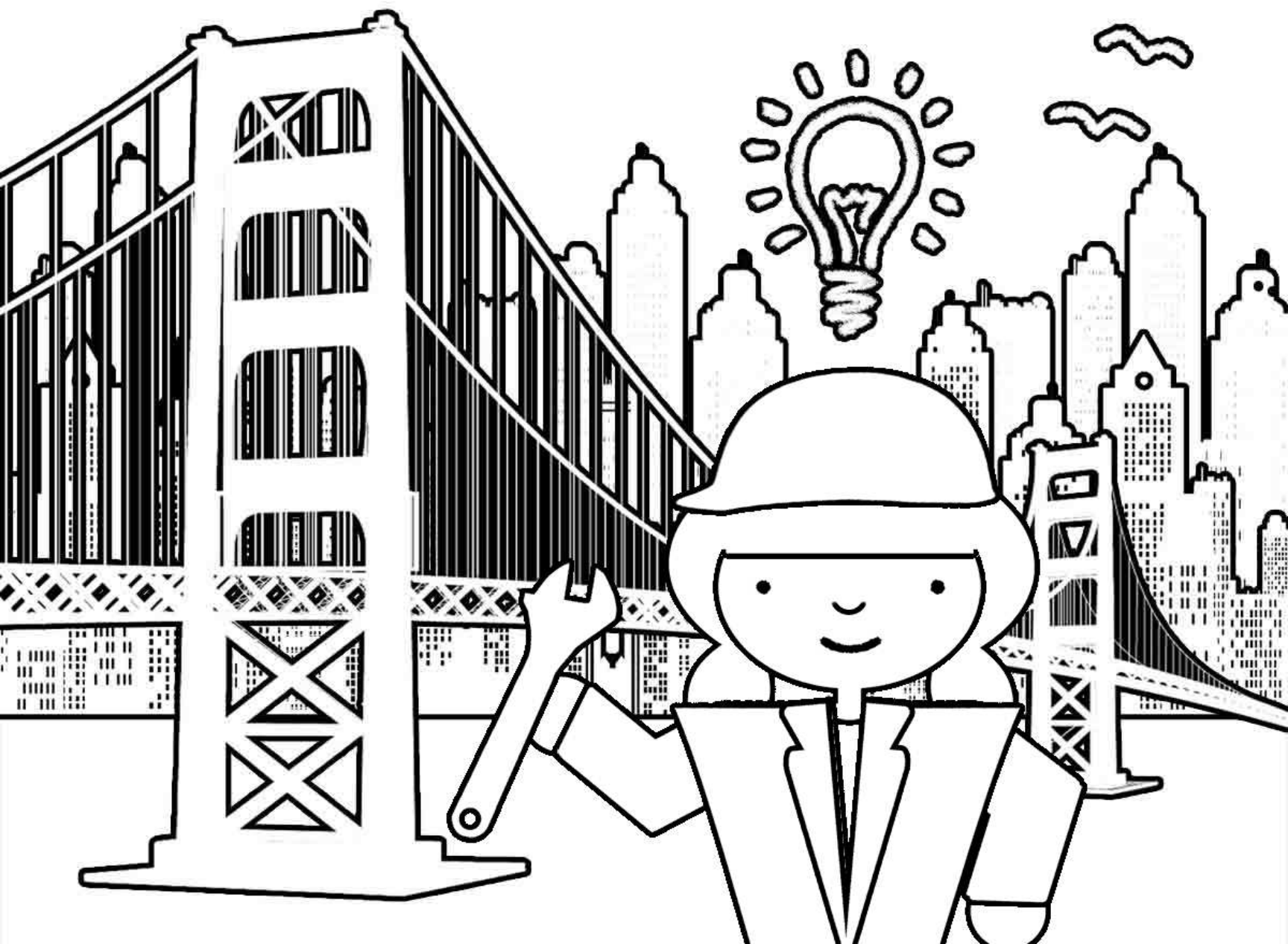
Discovery of
_____020a



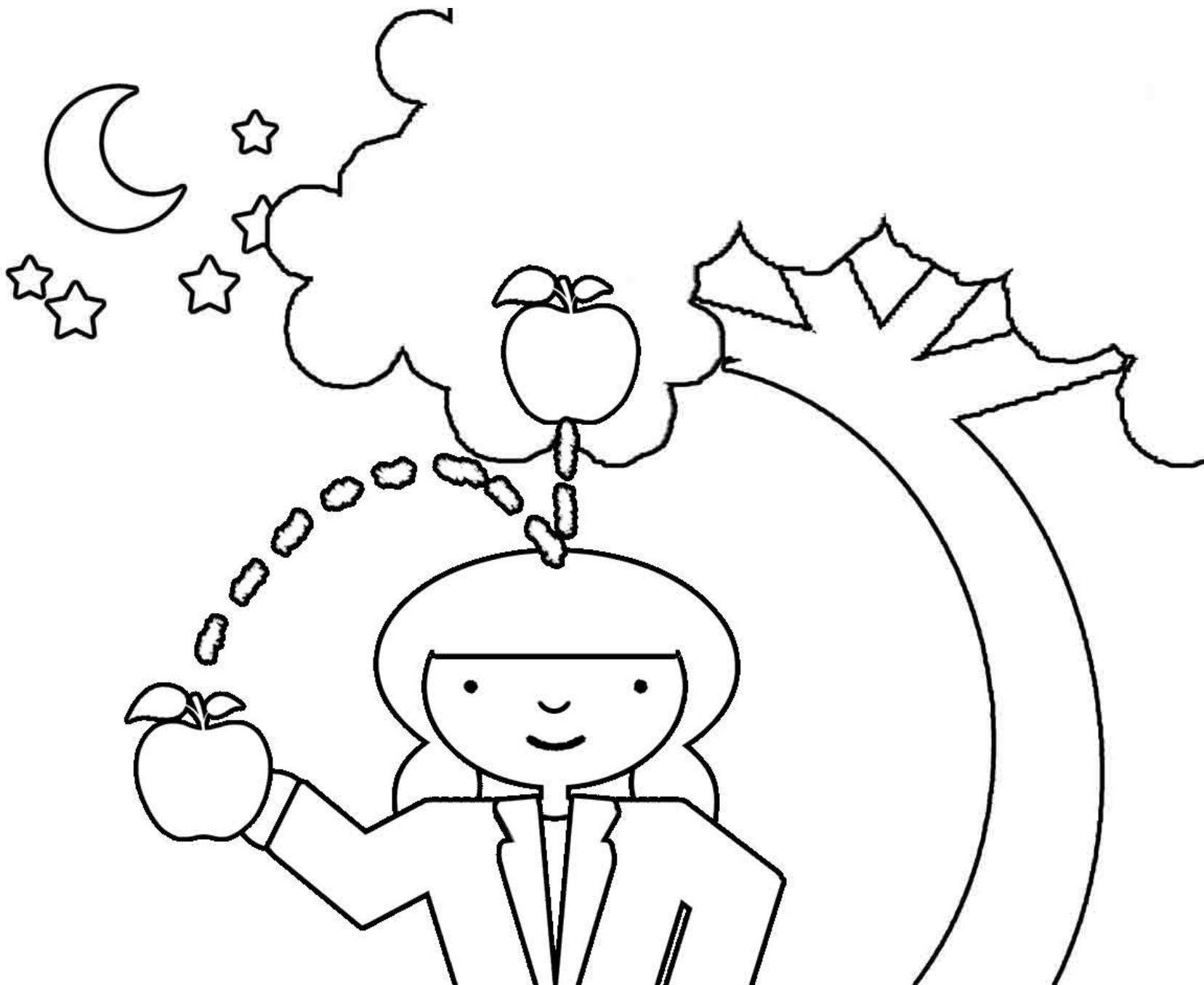
_____ is an agronomist. She is interested in crops,
to grow the sweetest corn to sell to all the shops.
She carefully chooses the seeds, lands, and soils,
to produce healthier foods and sustainable oils.



_____ is an engineer. She aims to find a solution,
to everyday problems like smog and pollution.
She designs buildings, bridges, cars and planes.
Whatever the challenge, she uses her brains.



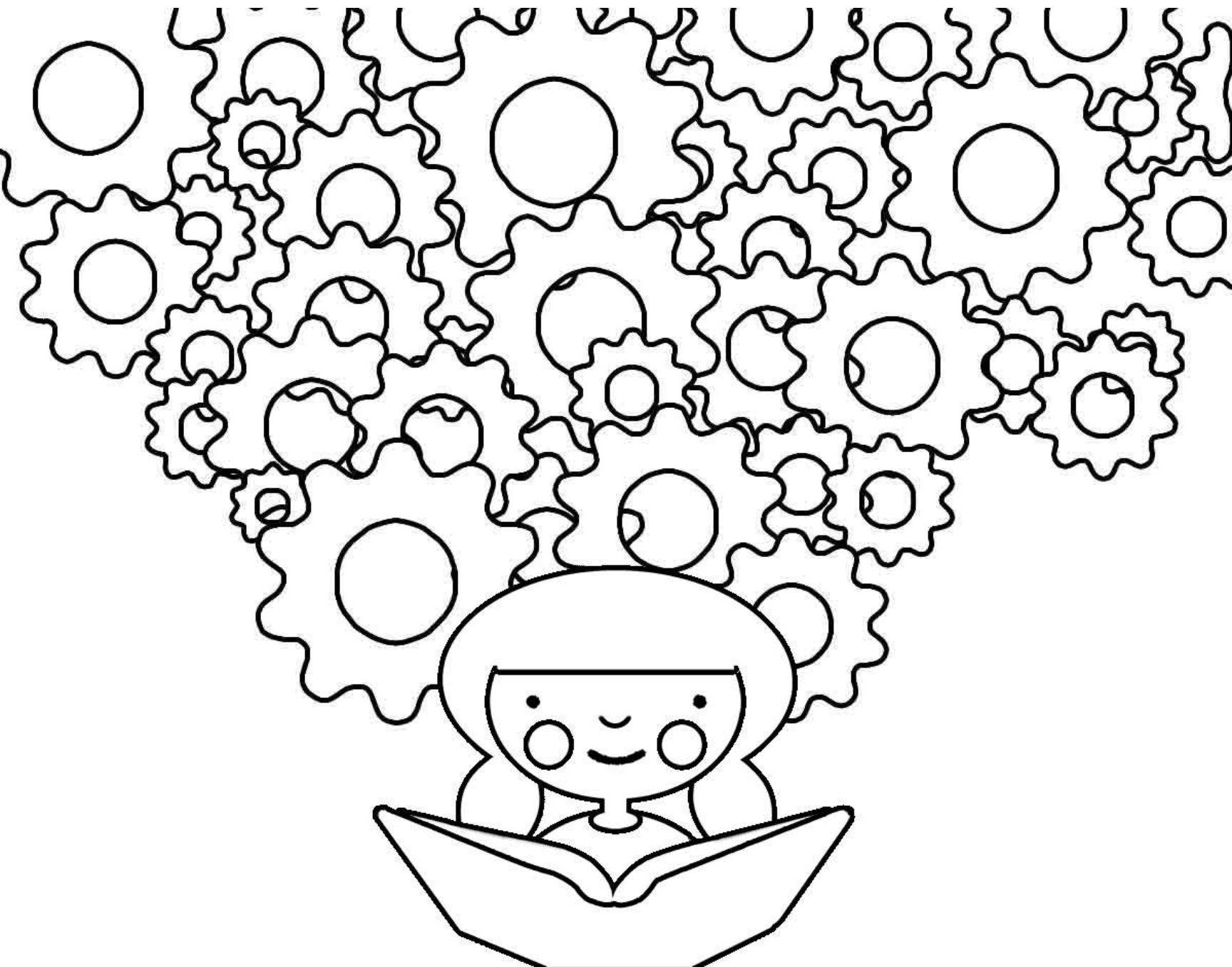
_____ is a physicist. She studies it all,
from galaxies to atoms, from humongous to small.
She wants to discover how the world came to be,
and just why an apple falls from a tree.



All of these choices, what will _____ explore?

What will she learn? What is waiting in store?

Tomorrow, when _____ wakes to a brand new day,
she will tackle the world in a brand new way.



Sometimes it is tough, sometimes it is rough,
sometimes it may feel like enough is enough,
though she may first fail, though she may stumble,
though she may doubt, though she may fumble,



_____ will try again! And she will make it through!
These big dreams she will chase! These big dreams she will pursue!
With hard work _____ big dreams will someday,
Surely change the world in a really big way!



Dream big, _____!



cuSTEMized is a not-for-profit initiative
that encourages kids to envision themselves
in Science, Technology, Engineering, and Math (STEM).

This book was made for

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