

Greetings!  
I'm Sally Tinker,  
the world's foremost inventor  
under the age of  
twelve.





And this strange specimen is my baby brother, Joe.



pick  
pick  
pick

Today, I'd like  
to reveal my latest  
and greatest  
invention.



The incredible ...



... the phenomenal, theEEARGH!!



Hi Sal!  
How've you  
been?

CHARLI !!

clap  
clap  
clap  
clap  
clap

Ladies and  
gentlemen - my colleague,  
Charli Stevenson. The world's  
foremost biologist under  
the age of eleven.

You know  
how I feel about  
hugs.

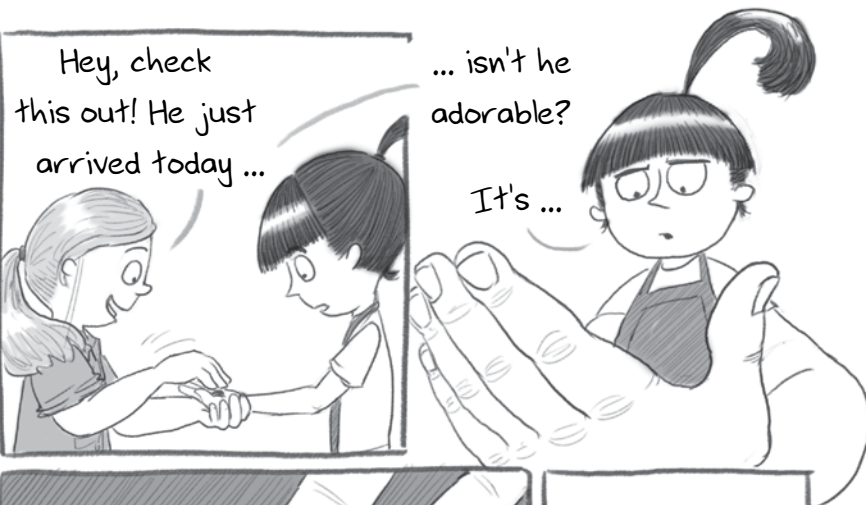
It's good  
to see you  
too.

And  
how's my  
little  
buddy?

Who  
you talkin' to,  
Sal?

Oh, it's, uh ...  
nevermind.





\*NB: artist impression only



This guy here is a very special kind of beetle. He's a **Scarabaeus sacer** - a sacred scarab - also known as ...



# SCARABAEUS SACER

(Linnaeus, 1758)

- AKA sacred scarab / Egyptian dung beetle
- Eats dung
- Rolls dung
- Just really, really loves dung
- Able to fly

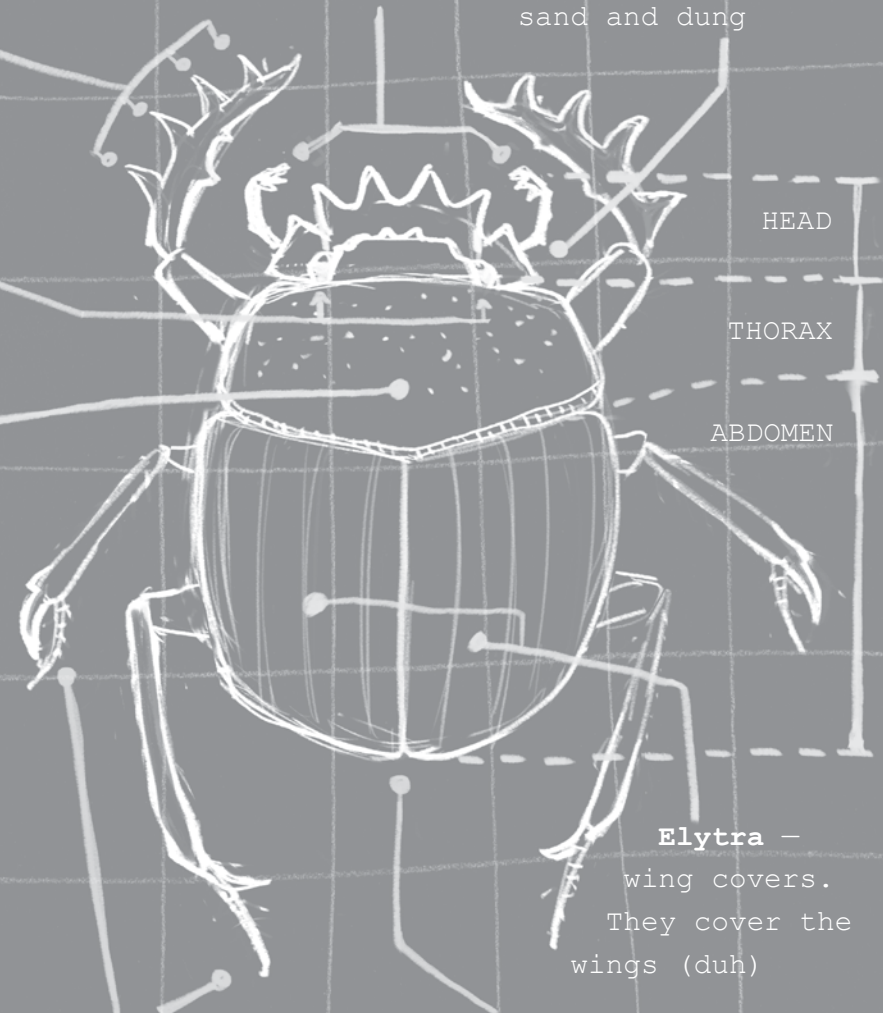
**Tibial 'teeth'** – used to dig tunnels and also to shape dung into balls

**Eyes** – dung beetles use the position of celestial objects to navigate. It's like a built-in GPS (Global Poo-sitioning System)

**Pronotum** – hard shell that protects the thorax. Think of it as armour worn by a tiny six-legged knight who rides a dungball instead of a horse

**Antennae** – these can smell smelly smells

**Shovel-shaped head** – for digging through sand and dung



HEAD

THORAX

ABDOMEN

**Elytra** –

wing covers.

They cover the wings (duh)

**Tarsi** – these grip the dungball while rolling

**Pygidium** – dung beetle bottom, i.e. where dung beetle dung comes from

**DID YOU KNOW?** The ancient Egyptians worshipped a god called Khepri, who they believed had a dung beetle for a head.

... the Egyptian dung beetle.

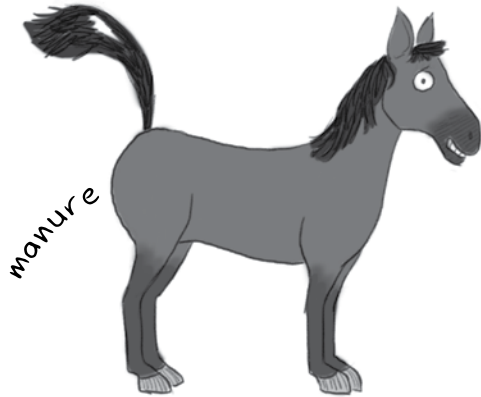
Uh, 'dung' beetle?



Yep, a dung beetle.  
His name's Douglas.

Yep, dung as in  
animal droppings,  
also known as ...

Dung as in ...  
animal droppings?



manure



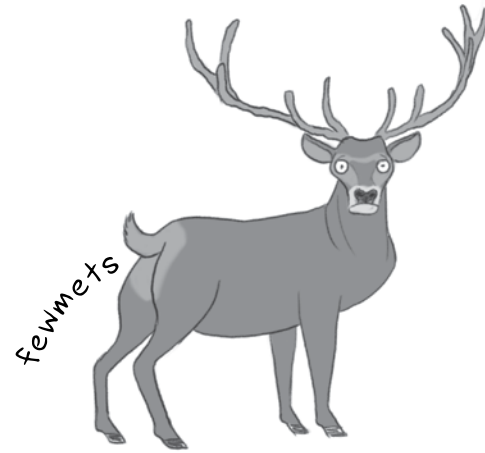
guano



scat



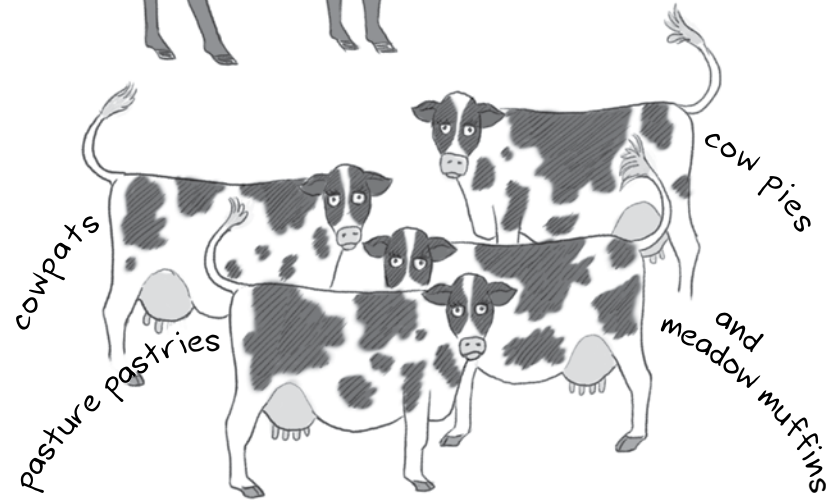
spraints



fewmets



frass



cowpats

pasture pastries

cow pies

and meadow muffins

Dung beetles eat  
all kinds of dung.  
That's why they're  
called dung beetles.

Charli,  
EWWWW! Get this  
mucky monstrosity  
off me!





They're not monstrosities, Sal,  
they're actually really important.

Dung beetles get rid of  
heaps of dung every day - literally.  
If it wasn't for Douglas and his  
rellies, we'd all be up to our  
eyebrows in poop.

These little guys  
are unsung heroes.



Ooh! And  
check this  
out!



EEEEK!!  
The filthy freak of  
nature can fly!

He's caught  
a whiff of something.  
I don't see any dung  
around here though,  
so what's he  
smelling?

I'll give you  
one guess.





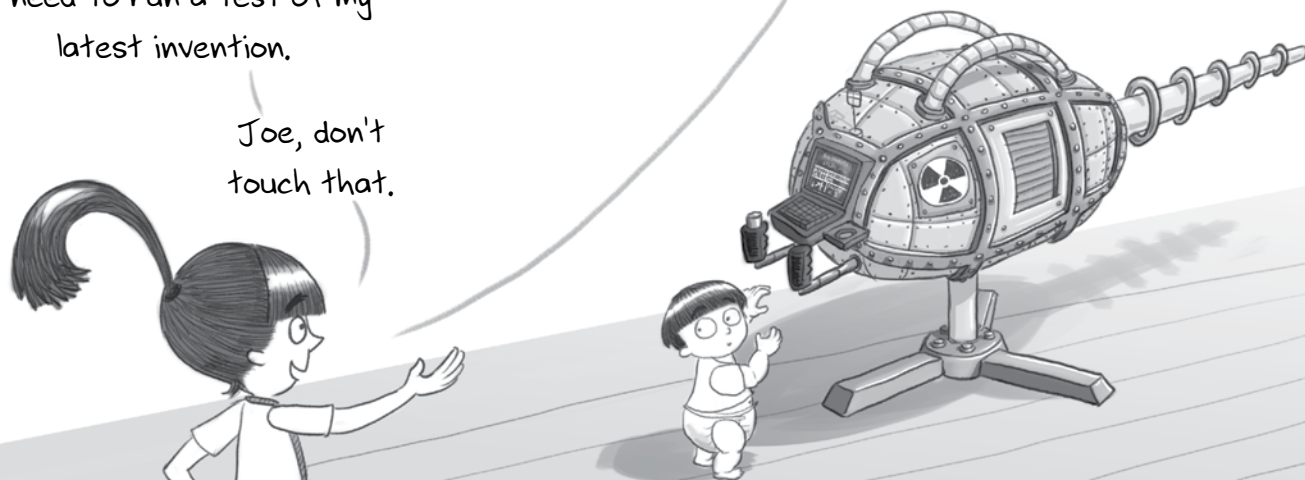


It'd be  
an all-natural,  
environmentally  
friendly solution!

Charli, could we  
save this delightful topic of  
conversation for another time?  
I need to run a test of my  
latest invention.

Joe, don't  
touch that.

Behold ...  
the world's first  
atomic inflation/deflation engine!

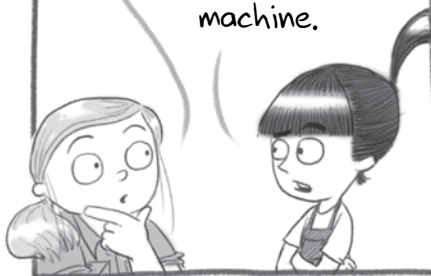


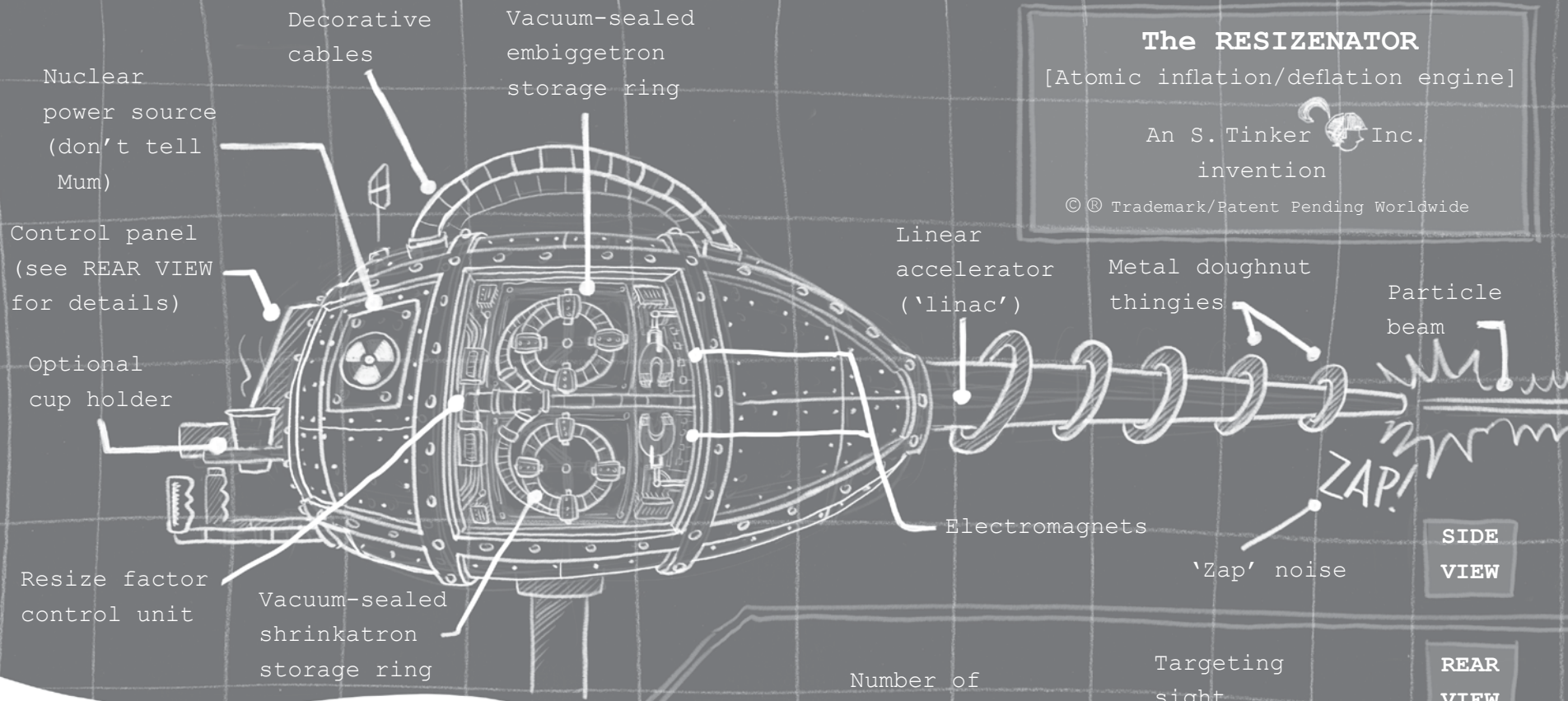
Wow! So ... it  
blows up balloons?

What? No, it's  
a matter magnitude  
manipulation  
machine.

It can scale  
items to immense  
or infinitesimal  
proportions.

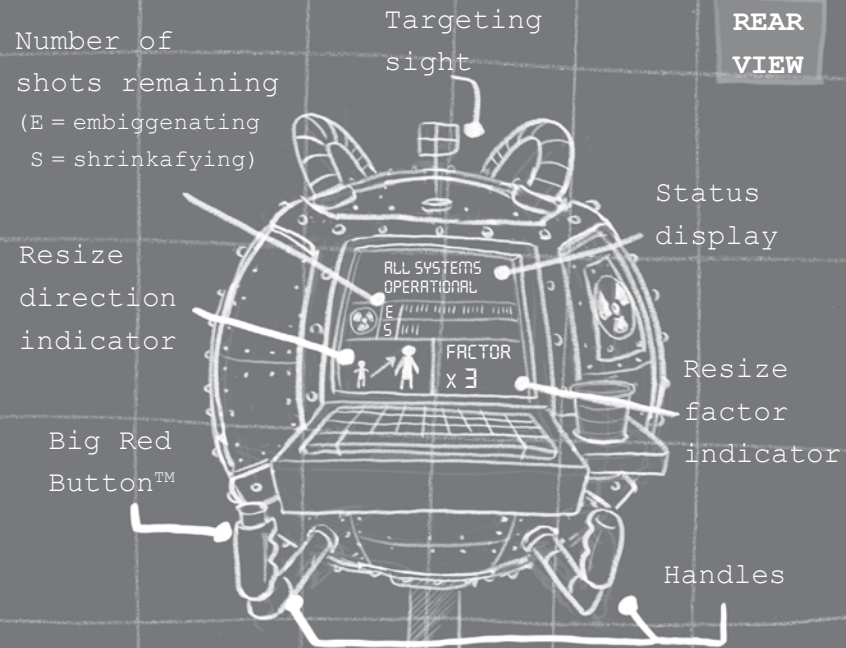
It makes  
things really big  
or really small.



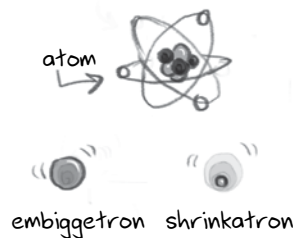


It's a growth ray AND a shrink ray?

Correct. I call it the Resizenator.



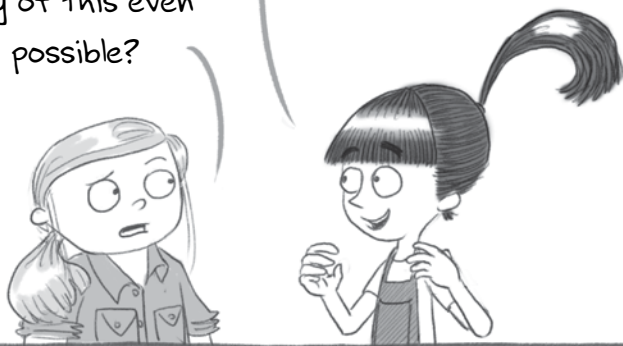
It runs on two new types  
of subatomic particle that  
I discovered: the **embiggetron**  
and the **shrinkatron**.



I observed that if  
I bombarded an object with a  
beam of concentrated, accelerated  
embiggetrons, I could increase  
the size of that object  
proportionally.

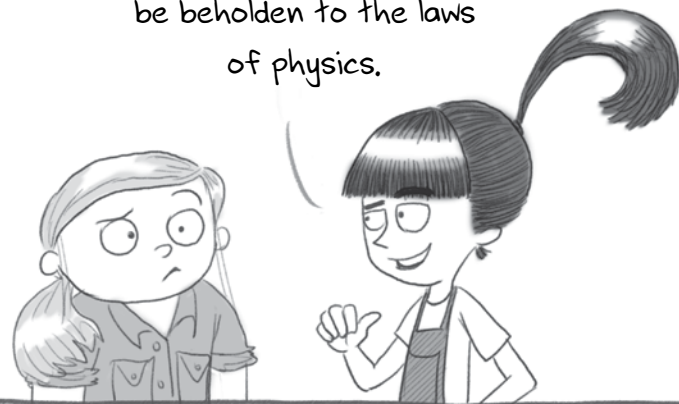
Shrinkatrons have the  
opposite effect. As a matter of fact,  
I used them to run the teenyweenytech  
components in Brobot's forearms.\*

But how is  
any of this even  
possible?



\*see 'Brobot'

I honestly have no idea.  
But I'm Sally Tinker! I will not  
be beholden to the laws  
of physics.



Well, is it safe?  
I don't know if you should  
be playing around with this  
if you don't know  
how it works ...

Oh, come now,  
Charli, the risks  
are worth it ...

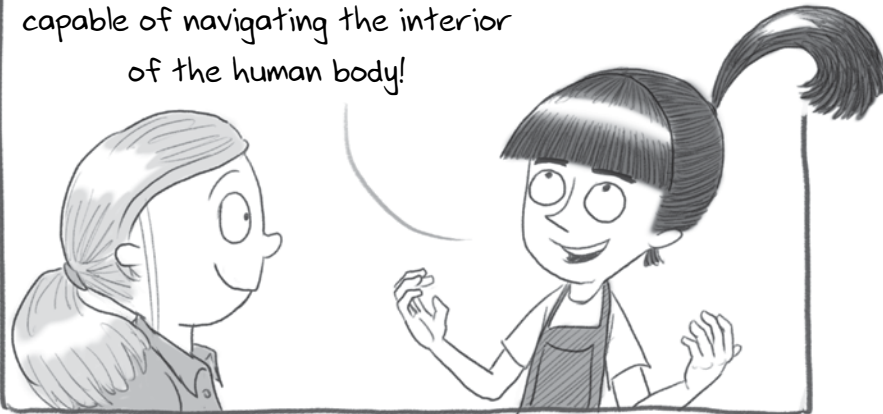




With my Resizenator,  
we could turn tiny model houses into  
full-sized dwellings in seconds,  
eliminating homelessness.

We could send miniaturised  
supplies to disaster areas, and  
re-enlarge them as required.

We could create a  
microscopic submersible craft  
capable of navigating the interior  
of the human body!



Wow, that sounds  
fantastic!

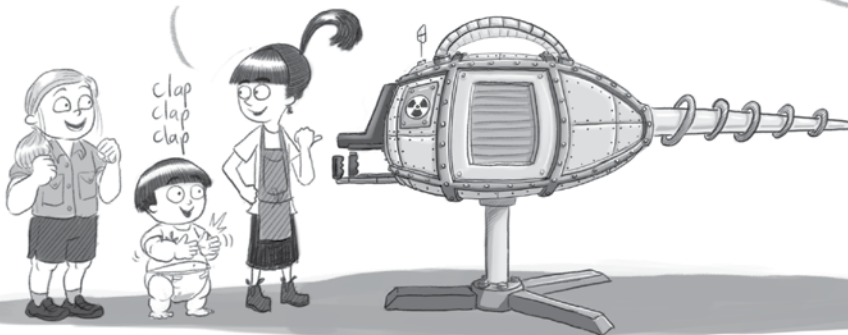
Indeed -  
it would be quite  
a voyage.  
Probably enough  
adventure to fill a  
whole book.

But for now,  
I have something  
else in mind.



Marvel as I turn this small pizza into ...

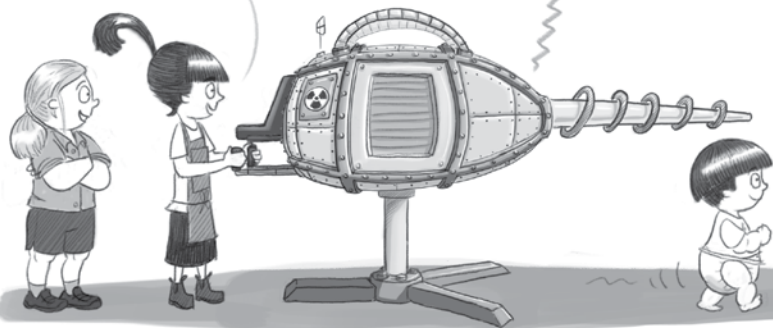
... a LARGE PIZZA!



Resize factor set  
to 'x3'. Initiating test.

EMBIGGENATING SEQUENCE  
ACTIVATED.

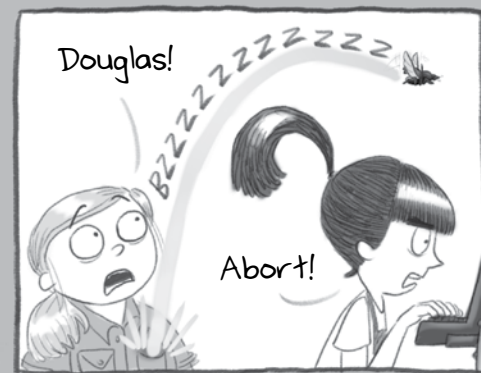
TARGET  
ACQUIRED.



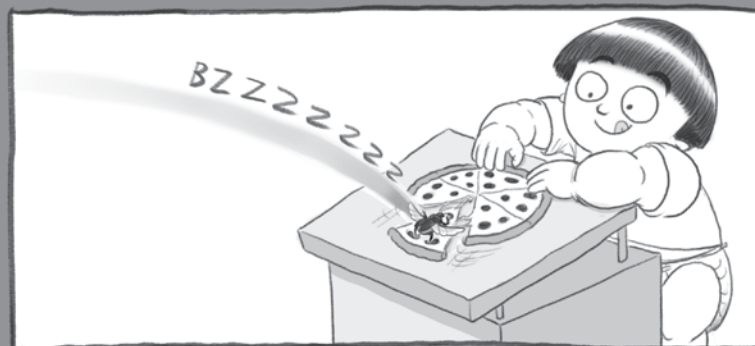
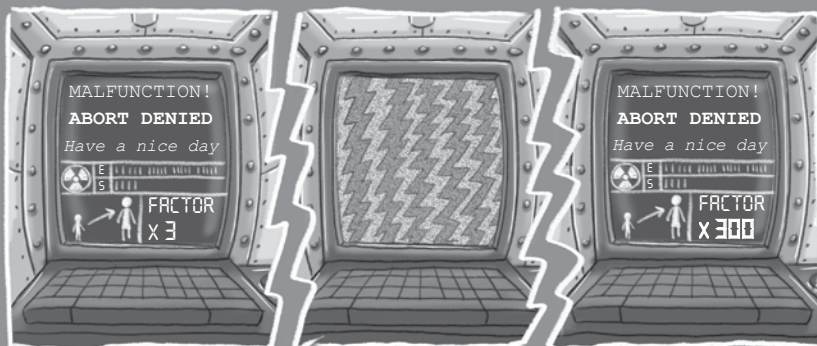
... FIRING IN 3 ...



2 ...



1 ...



... FIRE.



